

Editor

S. RAMANATHAN

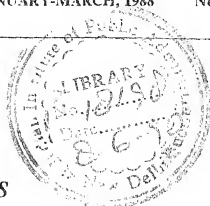
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Articles

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Air Pollution: A Growing Problem in Urban India

S. SIVA RAJU

RAPID INDUSTRIALISATION and unprecedented growth of urban centres in several countries have brought in their wake a lot of problems leading to deterioration of urban quality of life. A glance at population statistics reveals that the urban population is increasing at an alarming rate and the estimates show that it is bound to increase significantly in future also. Over the last 30 years, the population of urban areas has been growing by 4 per cent a year. In the last ten years alone the urban population has grown by more than 350 million people, and it will double in the next 20 years.¹ It was estimated that 70 per cent of the population in the more developed regions and 31 per cent of that in the less developed regions were in the urban areas.² Urban population is projected to reach 79 per cent by 2000 and 87 per cent by 2,025 in more developed regions and 44 per cent and 61 per cent respectively in the less developed regions.³ While in the 1950s, only one city in the developing countries had a population of 4 million, this number increased to 16 in 1980 and it is expected that by the year 2000, there will be 60 cities of this size.⁴

Industrialisation is the most important contributory factor for rapid urbanisation. It is observed that the rate of growth of industrial activity in developing countries during the period 1970 to 1975 was substantial.

¹P. S. Jha, "The Urban Explosions: Shelter for the Poor-I", *The Hindustan Times* February 12, 1987.

²United Nations, "Patterns of Urban and Rural Population Growth", *Population Studies*, No. 68, Department of International Economic and Social Affairs, 1980, pp. 15-16.

³United Nations, "Estimates and Projections of Urban, Rural and City Populations 1980-2025: The 1980 Assessments" cited in, *People*, Vol. 10, No. 2, 1983, New York, p. 36.

⁴M. W. Holdgate, et. al. (ed.), "The World Environment 1972-1982: A Report by the United Nations Environment Programme", Dublin, Tycooly, 1982, pp. 358-404, cited in World Health Organization, "Environmental Pollution Control in Relation to Development", *Report of a WHO Expert Committee*, Geneva, 1985, p. 25.

The developing countries' share in world manufacturing value added has increased from 8 per cent in 1980 to 10.3 per cent in 1981. The target set for developing countries shows that as far as possible, their share in total world industrial population should increase to at least 25 per cent by the year 2000.⁵

The situation in India is not exception to this trend of urbanisation and industrialisation. Urban population in India has been growing rapidly for the last five inter-censal decades, with increase of more than 30 per cent in each decade (Table 1). In India the largest cities are growing faster than all other types of urban settlements. The number of million plus cities has increased from 9 in 1971 to 12 in 1981.

TABLE 1 GROWTH OF URBAN POPULATION IN INDIA—1970-71

<i>Census year</i>	<i>Number of towns</i>	<i>Total urban population (in millions)</i>	<i>Percentage of urban population</i>	<i>Percentage growth in urban population during the decade</i>
1901	1,917	25.9	10.8	—
1911	1,909	26.0	10.3	0.4
1921	2,047	28.1	11.5	8.3
1931	2,219	33.5	12.0	19.1
1941	2,424	44.2	13.9	32.0
1951	3,059	62.4	17.3	41.4
1961	2,699	78.9	18.0	26.4
1971	3,119	109.1	19.9	38.2
1981	3,303	159.7	23.3	46.4

SOURCE: Different reports of Census of India, cited in (Late) S. N. Agarwala, *India's Population Problems*, Third Edition. (Revised by U. P. Sinha), Tata McGraw Hill, New Delhi, 1985, p. 57-58.

The rapid growth of industrialisation and other man-made processes in our country during 1951 to 1971 are clear from Table 2. It is seen that during this period, while urban population has nearly doubled, the industrial development and vehicular usage have increased to the extent of three-fold and five-fold respectively.

The chemical industry which is one of the important segments in industrialisation process, has expanded rapidly throughout the world. The rapidity of increase in the manufacture of some chemicals in India

⁵The Lima Declaration and Plan of Action on Industrial Development and Co-operation cited in World Health Organization, "Environmental Pollution Control in Relation to Development", *Report of a WHO Expert Committee*, Geneva, 1985, p. 37.

from 1950 to 1980 is significantly observed from Table 3. It is observed that the increase in the manufacture of organic chemicals (including petrochemicals) and fertilisers (nitrogenous and phosphatic) is more than hundred times during the period.

TABLE 2 SOME INDICATORS OF RAPID GROWTH OF MAN-MADE PROCESSES—1951, 1961, 1971: INDIA

Year	Total population	Total urban population	Industrial development	Vehicular usage
1951	100	100	100	100
1961	122	126	188	257
1971	152	175	320	541

SOURCE: G. S. Sastry, "Metropolitan Cities Environment—India", *Nagarloka*, Vol. XVII, No. 3, July-September, 1985, p. 4.

TABLE 3 INCREASES IN THE MANUFACTURE OF SOME CHEMICALS IN INDIA

Type of Chemical	Production x 10 ³ tonnes			
	1950	1960	1970	1980
Pesticides	*	1.46	3.00	40.68
Dyes and pigments	*	1.15	13.55	30.85
Pharmaceuticals	0.25	1.23	1.79	5.07
Organic chemicals (incl. petrochemicals)	200	580	17,100	24,100
Fertilizers (nitrogenous and phosphatic)	18	153	1,059	2,005
Caustic soda	11	101	304	457

SOURCE: B. B. Sundaresan, *et al.*, "An Overview of Toxic and Hazardous Waste in India" in *Industrial Hazardous Waste Management: Industry and Environment*, Special Issue No. 4, p. 70. Paris, United Nations Environment Programme, 1983, cited in WHO Expert Committee report on "Environmental Pollution Control in Relation to Development". WHO Technical Report Series 718, World Health Organization, Geneva, 1985, p. 39.

*Not available.

This unprecedented increase in industrialisation, especially in metropolitan cities has led to a serious destruction in quality of life of the urban people and the important problem being environmental pollution. The problem of pollution is becoming increasingly complex and intractable in our cities. All our industrial cities are in no way less polluted

than those in the western world, the only difference is that pollution in our country occurs in isolated pockets.

Among various types of pollution, air pollution poses a serious problem due to its various effects on health condition of people. Air pollution may be defined as "the presence in the outdoor atmosphere of one or more contaminants, such as dust, fumes, gas, mist, odour, smoke or vapour in quantities of characteristics, and of duration, such as to be injurious to human, plant or animal life or to property, which unreasonably interferes with the comfortable enjoyment of life and property".⁶ WHO experts have defined air pollution as, "substances put into air by the activity of man in concentration sufficient to cause harmful effect to his health, vegetation, property or to interfere with the enjoyment of his property".⁷

Sources of Air Pollution

Air is being contaminated constantly with impurities such as carbon monoxide, carbon dioxide, particulate matter, sulphur oxide, sulphur dioxide, hydrogen sulphide, hydrocarbons, fluorine compounds, organic gas, aldehydes, beryllium, carcinogenic agents and radioactive materials. The major sources of urban air pollution are automobiles, industrial processes, solid waste disposal, combustion of fuel in electric power plants, space heating and coal waste fire. Industrial emissions mainly originate from manufacturing units of iron and steel, gas, lime, ceramics, sulphuric acid, nitric acid and fertilizers and coal and oil fired electricity generating stations. The major transportation sources of air pollution are motor vehicles, rail marked vehicles and air planes and they emit the pollutants like carbon monoxide, hydrocarbons, oxides of nitrogen and particulates. Chemical industries have a profound effect on human health and its effects are mainly due to contacts with or ingestion of chemicals.

Nature and Level of Air Pollution

It is estimated that roughly 500,000 compounds are being emptied into the world environment each day.⁸ Further, it is estimated that large volumes of refuse are produced in all cities of the world; in industrialised countries an estimated 0.6—1.0 kg of refuse is generated by

⁶The Engineer's joint council's definition of air pollution, cited in V. P. Saxena, "On Way to Fight Pollution", *Lokrajya*, Vol. 42, No. 6, July 16, 1986, p. 60.

⁷H. U. Bijlani, *Urban Problems*, New Delhi, Centre for Urban Studies, HPA, 1977, p. 125.

⁸Society for Clean Cities, "Ecology, Environment and Man"—Proceedings, Conclusions and Recommendations of the *Seminar* held on, January 14-16, 1974, Bombay, 1974, p. 122.

every inhabitant per day, whereas this figure is 0.3—0.6 kg in the developing countries.⁹

According to a survey conducted by National Environmental Engineering Research Institute,¹⁰ the total refuse generated in 174 Class I Cities (whose population is over 1,00,000) of our country is reported as 32,450 tonnes per day and it is expected to reach more than 60,000 tonnes per day in the year 1991. Out of this, the largest of the 12 metropolitan cities—Calcutta, Bombay, Delhi, Madras, Bangalore, Hyderabad and Ahmedabad alone constitute 18,000 tonnes of refuse per day. From the analysis of air pollution levels of different cities of our country,¹¹ it is concluded that: (i) the metropolitan system is gradually tending towards the poor air quality, and (ii) Calcutta and Jaipur are the highest and least polluted metropolitan cities respectively. The second and subsequent levels are occupied by Bombay, Kanpur, Hyderabad, Delhi, Ahmedabad, Madras respectively. Carbon monoxide and SO content are found to be significantly increasing in cities like Bombay, Calcutta, Durgapur, Baroda, Ahmedabad and Poona. According to the trend extrapolation,¹² the air pollution in our metropolitan cities will be three times more than what it is today unless drastic actions are taken immediately. A study carried at Bombay, Delhi and Calcutta by Air Pollution division of the then CPHERI in 1968 and 1969¹³ indicated a concentration of dust in the atmosphere from two to five times greater than that of cities in Europe or North America.

In Calcutta, presently around six thousand factories, 0.1 million small scale industries, 29 thousand furnaces, over 1 million open air domestic cooking ovens, about 0.3 million automobiles and a huge quantity of obsolete plants and equipments are there.¹⁴ According to a report published by NEERI, Calcutta emits a total of 1299 tonnes of pollutants a day, about 43 per cent of which are from suspended particulate matter and about 35 per cent are in the form of carbon monoxide.¹⁵ Air quality measurements carried out by NEERI and CSIR have shown that air quality in Calcutta falls short of the minimum standards in terms of

⁹World Health Organisation, *op. cit.*, pp. 28-29.

¹⁰Article on "Management of Urban Solid Wastes", *The Bombay Civic Journal*, Vol. XXXII, No. 7, September 1985, p. 8.

¹¹G. S. Sastry, "Metropolitan Cities Environment: India", *Nagarloek*, Vol. XVII, No. 3, July-September 1985, pp. 1-10.

¹²Rashmi, Mayur, "Dimensions of Urban Pollution" in C.S. Chandrasekhara and Deva Raj (ed.), *Urban Perspective-2001*, New Delhi, National Institute of Urban Affairs, 1978, p. 165.

¹³A. S. Kochar, "India Uses the Sun As An Ally", *World Health*, August-September, 1971 cited in H. U. Bijlani, *op. cit.*, p. 126.

¹⁴A. Halder, *Pollution Rules over Calcutta*, Omniprint, 1984.

¹⁵J. Parikh, "Environmental Problems of India and Their Possible Trends in Future", *Environmental Conservation*, 4 (3), 1977.

four out of five air quality parameters, namely, SPM, SO₂, sulphation rate and dust fall.

In Bombay, air pollution continues to ravage people, vegetation and animals. Like Mexico city, Bangkok, Lagos, Calcutta, Cairo and Sao-paulo, it is one of the polluted cities in the world.¹⁶ In this city, the 3 lakh automobiles, piston air craft, ships, diesel locomotives and jet aeroplanes give out 60 kg, 334 kg, 190 kg, 32 kg and 6.2 kg of pollutants every 500 to 1000 km moved by them.¹⁷ Almost 55 per cent of the pollution in the city is due to the 4,60,000 vehicles which are increasing by 70 a day and 75 per cent of them are not even road worthy.¹⁸ A study conducted in Bombay¹⁹ has shown that 1,600 tonnes of air pollutants are thrown every 24 hours. Total amount of SO₂ given out in the city is 300 tonnes, out of which the Chembur area alone accounts for 240 tonnes per day.

In Delhi, it is found that the Najafgarh Industrial area has a pollution level more than four times the safe limit. Further, it is observed that in the Tilak Bridge area the presence of carbon monoxide in the atmosphere is 10 times more than the permissible limit.²⁰ There are about 1,200 medium and small units in Ashok Vihar-Wazirpur complex at Delhi and a survey conducted in this area found a cyanide content of two mg. per litre against the prescribed limit of 0.2 mg. per litre.²¹ It is reported that about 80,000 to 90,000 vehicles are added every year to Delhi's already packed roads and two wheelers account for 60 per cent of the total one million vehicles.²² Hardly 25 per cent of DTC buses in Delhi is found to have the ISI standards for emission of air pollutants. Further, it is noted that almost 100 per cent of the diesel powered tempos and the like and 30-40 per cent of cars exceeded the ISI limits.²³ According to a WHO study, a person in Delhi contains more DDT in his blood stream than in most parts of the world and the dust particles in Delhi atmosphere are the highest compared to any city in India.²⁴

¹⁶Rashmi Mayur, "London Smog Can Hit Bombay", *Indian Express*, Bombay, February 14, 1987.

¹⁷P. J. Deoras, "Saving Bombay From Bio-degradation", *Lok Rajya*, Vol. 42, No. 6, July 16, 1986, p. 26.

¹⁸Rashmi Mayur, *op. cit.*

¹⁹P. J. Deoras, *op. cit.*, p. 26.

²⁰Article on "And Quiet Flows Defiled Yamuna", *Monthly Review, Civic Affairs*, Vol. 31, No. 6, January 1984, p. 5-7.

²¹E. F. N. Ribeiro, "Planning for the Capital", *Civic Affairs*, Vol. 31, No. 12, July 1984, pp. 17-24.

²²"Delhi's Roads are Cracking up", *Indian Express*, Bombay, December 28, 1986, p. 3.

²³"Light Vehicles Main Source of Air Pollution", *Patriot*, October 4, 1986.

²⁴Rashmi Mayur, *op. cit.*, p. 165.

Effects of Air Pollution on Health

The impact of each pollutant discharged into the air has immediate and delayed, direct and indirect, short-term and long-term effects on the life of people in urban areas. An unusual increase in air pollution can cause immediate rise in morbidity and mortality. It is considered to be a major contributor to fast aging, berylliosis, emphysema and mesothelioma and as a contributing source to bronchitis, cancer of the GI track and cancer of respiratory track. Mathur has stated that one of the main pollutants—carbon monoxide—could produce dizziness, lassitude and headache and even cause death if present in excessive amounts, while an increased presence of lead could cause brain damage and even cause people to become idiots.²⁵ Another pollutant, sulphur oxide causes injury to respiratory system, irritation to respiratory track, lung tissues and eyes. Nitrogen oxide increases children's susceptibility to diseases like flu and lead interferes with ability to produce blood. In case the pollution is not intensive, it can cause irritation of exposed mucus membranes resulting in conjunctivitis, etc., and feeling of suffocation.²⁶

Delayed effects of air pollution will vary depending upon the type of pollutant. Beryllium poisoning, for example, has been known to occur decades after the victims were exposed to low concentrations of the metal for brief periods of time.²⁷ Similarly, in any one year, the carbondioxide emitted by fossil fuel consumption will have a negligible effect upon the global climate. Once omitted, however, much of the CO₂ will remain in the atmosphere for a very long time and after a few decades enough could build up to cause dramatic alterations in the temperature and rainfall patterns of the world.²⁸ Even genetic effects cannot be ruled out in case of radioactive and chemical substances.²⁹ Some modern synthetic chemicals and some traditional chemicals used in production are hazardous in small quantities and may persist and accumulate in the environment over long periods of time.³⁰

Health problems of urban people due to air pollution are brought out by several studies conducted from time to time in major cities of our country. Studies conducted over a decade in Bombay have shown an upward trend in the incidence of chronic bronchitis and asthma.³¹

²⁵*Patriot, op. cit.*

²⁶H. U. Bijlani, *op. cit.*, p. 127.

²⁷Anthony Tucker, *The Toxic Metals*, London, Earth Island 1972, cited in Hayes Denis, "Pollution: The Neglected Dimensions", World Watch Paper 27, World Watch Institute, USA, March 1979, p. 8.

²⁸*Ibid.*, pp. 8-9.

²⁹H. U. Bijlani, *op. cit.*, p. 127.

³⁰World Health Organization, *op. cit.*, pp. 39-40.

³¹Bombay Air Pollution Health Survey: Interim Report of One Year 1977-78. Bombay, Municipal Corporation of Greater Bombay, 1979, cited in World Health Organization, *op. cit.*, p. 12.

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²⁷Anthony Tucker, *The Toxic Metals*, London, Earth Island 1972, cited in Hayes Denis, "Pollution: The Neglected Dimensions", World Watch Paper 27, World Watch Institute, USA, March 1979, p. 8.

²⁸*Ibid.*, pp. 8-9.

²⁹H. U. Bijlani, *op. cit.*, p. 127.

³⁰World Health Organization, *op. cit.*, pp. 39-40.

³¹Bombay Air Pollution Health Survey: Interim Report of One Year 1977-78. Bombay, Municipal Corporation of Greater Bombay, 1979, cited in World Health Organization, *op. cit.*, p. 12.

Increasing number of people in this city are reported to have become victims of asthma, emphysema, headaches, cold, cough, irritation of eyes and nose and arrays of respiratory illnesses in some of the high polluted areas. It is stated that the total damage due to pollution may run into several hundred crore annually, not counting the medical cost, pain suffering, loss of work time and early death.³² It is estimated that about Rs. 250 crore is spent every year by the state government and the Bombay Municipal Corporation in treating patients having respiratory complaints caused because of excessive carbon monoxide in the air of Bombay.³³ A major study on air pollution in Bombay has shown³⁴ that there were higher morbidity in polluted areas for breathing problems, coughs and common colds. It is found that in all respects slum residents were suffering more, except for high blood pressure. Respiratory deaths were found to be highest in areas where industrial pollution was high. The problem of air pollution in Calcutta is reported to be more acute specially during winter, causing very often headaches, respiratory troubles and irritation of eyes and nose.

Incidence of morbidity and mortality due to air pollution is reported to be increasing in our country. The leakage of gas from Union Carbide factory at Bhopal in December 1984, resulted in more than 2000 deaths and made several thousands sick. Chlorine gas leaked from a factory at Chembur area of Bombay on August 30, 1985, ended with the death of a person and hospitalised nearly 200 people.³⁵

It is high time now to realise the hazards of pollution and adopt appropriate measures to combat this growing problem. The citizen's report of 1982, regarding the state of environmental health in India³⁶ has rightly warned that "Every third person who dies is a child below the age of five, a victim of a vicious combination of poverty, malnutrition, insanitary environment and unclean drinking water, with water pipes empty most of the time and sewage seeping into them, hepatitis is increasing by leaps; increasing use of cigarettes and bidis and greater use of chemicals because of industrialisation, already results in half a million deaths from cancer every year. By the end of the century, India could be an unenviable country with so-called diseases of poverty and of affluence co-existing with each other".

³²Rashmi Mayur, *op. cit.*

³³V. P. Raja, "Automobile Pollution", *Lok Rajya*, Vol. 42, No. 6, July 16, 1986, p. 19.

³⁴Municipal Corporation of Greater Bombay, "Bombay Air Pollution—Health Study—A Study of Urban Effect on Citizen's health in a Developing World", Bombay, 1984.

³⁵S. Siva Raju and I. Udaya Bhaskara Reddy, "Urbanisation and Urban Problems in India", *Nagarloka*, Vol. XVII, No. 3, July-September 1986, pp. 1-20.

³⁶T. N. Khoshoo, *Environmental Concerns and Strategies*, New Delhi, India Environmental Society, 1984.

Measures to Control Air Pollution

Though pollution is unavoidable as a result of industrialisation, efforts should be made to minimise it. Otherwise, it may imperil the very development that we are hoping to achieve.

Combination of policy decisions, legislative checks, management skills and technological innovations are necessary to combat the problem and thus to maintain the ecological balance. Some of these measures could be the following:

1. Location policies have to be adopted not only to develop backward areas, but also to reduce hazards of air pollution.
2. Before initiating any development project in an area, its short-term and long-term impacts on environment and population should be thoroughly assessed by adopting environment/health assessment measures.
3. Priority should be given to modernise industrial machinery in old industries which are mainly responsible for air pollution.
4. As Industrial workers are often exposed to various types of pollutants, it is very important to closely monitor their health condition. In this regard, it may be suggested to adopt better machinery to check the health status of the workers from time to time and thus to take preventive measures to combat pollution problem.
5. As automobile emissions are the major sources of air pollution, appropriate and more suitable policies for transportation should be evolved to improve its efficiency. Efforts should be made to regularise the growth and manner of automobile use.
6. Government should declare more incentives in the form of financial benefits, tax concessions, etc., to benefit those industries which reduce the emission of pollutants drastically. In case of highly polluting Industries, government should even help in installing pollution control equipment.
7. Stringent legal measures to control air pollution have to be adopted as in the case of developed countries. For example, it is reported³⁷ that several legal requirements have been issued in Japan, the USA and several European countries for the reduction of carbon monoxide, hydrocarbons and oxides of nitrogen. Similarly, in London, no burning of firewood, plastics, paper, etc., is allowed.³⁸ In New York, it is reported that the Mayor would declare an emergency if the air quality declines below certain standard.
8. Provision should be made for adequate compensation for the victims of air pollution. In Japan, a law entitled "compensation of

³⁷World Health Organization, *op. cit.*, p. 32.

³⁸Rashmi Mayur, *op. cit.*

pollution—related health damage” internalises the costs of pollution through emission charges levied on polluters and tens of thousands of people are compensated from these funds each year for pollution-induced illnesses.³⁹ Such type of fund should be created in our country also to benefit those who get pollution induced illnesses.

9. There should be massive plantation of trees all over cities. This will help to resist air pollution in a greater way.
10. The enormity of the task of protecting the environment is so high that no government can address itself to all problems. Moreover, mere government action will not be adequate. It is only by a greater civic consciousness that we can ensure a cleaner environment. In this regard, environmental education should be effectively imparted for all sections of our society and for this, both interpersonal and various mass media sources like films, radio, TV, newspaper and pamphlets should be utilised. □

³⁹Hayes Denis, *op. cit.*, p. 26,

Municipal Financial Resource Mobilisation in India

ABHIJIT DATTA

THE ARTICLE intends to highlight the recent experience of municipal financial resource mobilisation in India in terms of the following aspects:

- economy in municipal expenditures,
- increase in municipal revenues,
- private and community participation, and
- central and state supportive measures.

In the light of relevant Indian experience, the paper would set out critical issues and options for action. However, at the very outset some of the major constraints in municipal resource mobilisation may be indicated as: (a) restricted functional domain, (b) limited revenue base, (c) serving the urban poor, and (d) lack of adequate fiscal transfers. The thrust of our paper is on the domestic efforts by the municipal authorities to increase their resources; however, we shall also touch upon the various central or state support measures for municipal resource mobilisation. A concluding section indicates the desired direction of needed reforms in municipal government.

ECONOMY IN MUNICIPAL EXPENDITURES

There are several methods of economies in municipal expenditure already pursued by various municipal authorities in India. These are: (a) adopting appropriate and cheaper technologies, (b) elimination of wastes, (c) increased productivity, (d) contracting out, and (e) joint services. Indian experiences in these areas are indicated below.

Cheaper Technologies

The most outstanding example of adoption of cheaper technology is the widespread installation of pour-flush latrines in place of water-borne

sewerage in many of the towns and smaller cities. In the state of Bihar, a private organisation installs these on turn-key contracts with the municipal authorities. Apart from the congested parts of the larger cities or where the underground water table is high (between 4-5'), such use of cheap technology has been found to be quite satisfactory, both from the public health and the financial angles.

The second example is from the field of shelter. The earlier policy of slum clearance has been replaced by slum improvement, with the result that the larger municipal bodies are no longer burdened with the enormous cost of land acquisition in the city core for slum clearance and rehabilitating the evictees in alternative accommodation to be provided at public expense. Instead, the existing slums are made more habitable through improved access, street lighting, and provision of community facilities. These efforts are largely funded through a central scheme on environmental improvements of slums. Sometimes, even structural improvements of slums are also attempted through self-help where the municipal authorities grant tenure to the slum dwellers, as in Hyderabad. Elsewhere, conversion of dry latrines into water-borne ones are encouraged through beneficiary participation with matching contribution from the municipal authorities, partly in loan and partly in grants.

Elimination of Wastes

This is a difficult and politically charged area in municipal management. However, improved supervision in road construction has resulted in considerable economy in a number of municipal authorities, like Delhi. Another area is reduction in leakage through water and sewerage distribution pipes. In the older cities about a third of filtered water supplied from the mains is lost through pipe leakage; similarly, a considerable part of the waterborne sewer is also overflowed due to sewer-pipe blockage. Proper monitoring of the distribution system requires adoption of improved technology for leakage detection. This is being attempted in Calcutta under the World Bank assisted urban development programme (CUDP III).

Increased Productivity

New Delhi municipality has recently undertaken a scheme of mechanisation of street cleaning. The redundant sweeping staff has been redeployed in other municipal activities, like construction work. This can be replicated in other new towns and in city areas having wide roads where the mechanical sweepers can be deployed. In several large municipal authorities, computerisation of billing, payroll preparation, accounting, and monitoring tasks are being done through computers. The most outstanding example in this regard is to be found in Bombay

where the computerisation programme started with the implementation of the city water supply scheme funded by the World Bank. This is now being attempted in other departments as well, particularly in the fields of taxation and accounting. A more widespread use of computers to effect economy in the salary bill of the municipal employees is resisted by the staff-unions due to the fear of retrenchment, as it is not always possible to find alternative avenues of employment for the surplus staff within the same municipal authority.

Contracting Out

The most widespread use of the contracting out technique is road construction and maintenance by the municipal authorities. The actual road works are carried on by the contractors in terms of plans, specifications, and funding by municipal public works or roads department.

There are instances of several cities allowing private companies to beautify and maintain parks, or traffic islands. In Bombay, the airport road was widened out of the fixed advertisements by several companies in the traffic verge all along the route—an example of pooling of the contracting out approach. Another area where the contracting out method has been tried, with some degree of success, is garbage collection in Bhavnagar.

Joint Services

In the Calcutta metropolitan area, there are three examples of joint municipal services for water supply, ambulance and river ferry. Octroi checkpoints are generally operated by the main city both for the city and the adjoining cantonment, while the net collection is shared by these two urban authorities on the basis of their population. This is the prevailing practice in Delhi too where the municipal commissioner is the collecting agent for terminal tax and the net proceeds are shared among the three urban authorities within the union territory.

INCREASE IN MUNICIPAL REVENUES

The three main sources of domestic municipal revenues are: (a) taxation, (b) non-tax revenues, and (c) enterprise profits. A review of the existing municipal efforts for mobilising their domestic revenues from these sources is in order.

Taxation

About 65 per cent of municipal revenues are ascribable to taxation. Property taxes and octroi are the main taxes; other minor taxes are professions tax and non-motorised vehicles tax. In the non-octroi states, the municipal authorities are sometimes empowered to levy a show tax.

Entertainment tax and motor vehicles tax are generally shared.

Property taxes include a number of specific service taxes such as water tax, scavenging tax, education tax, fire tax, etc., which use the same tax base for assessment purposes. Therefore, an improvement in property tax valuation automatically increases the prospects for revenue mobilisation in respect of the family of property taxes. However, there are major constraints in improving property tax valuation (on rental value) which is pegged to the legally mandated standard rent under the rent control legislations.

The revenues from property tax proper are also adversely affected by wide exemptions, unrealistic progression of rates, high (nominal) rate structure and poor collection. It is noticed that at the bottom end of the tax slab, about 80 per cent of the taxable properties are concentrated (mostly small holdings) where the cost of collection is very high. Multiple rate schedules also affect the cost of tax administration. In order to smoothen the sudden jumps in slabs, there are legislative provisions to allow marginal tax relief (Delhi), or for a smooth progression of rates (Calcutta). Apart from these two cities, this problem has not been solved elsewhere, so that sometimes one finds a municipal tax having a single rate (Bombay). However, on the rating front, the major problem is the high average nominal combined property tax rate in most of the municipal authorities, particularly in Bombay (61 per cent rateable value). This type of high illusory rate can be sustained only due to low valuation base. There is, however, a limit to rate increases at a realistic level (say, beyond 100 per cent) due to rate illusion on the part of the taxpayers.

As for property tax collection, it is found that only about 50 per cent of the total demand is collected, and large arrears are locked up in court disputes. Appropriate rebates and streamlining of property tax administration, supported by changes in rating arrangements, can greatly improve collections, as experienced in Delhi recently. The key to improved collection lies in reducing the cost of collection through an overall improvement in the property tax system.

Octroi is slated for abolition in India through a state-wide assigned tax, called the entry tax. While Octroi (or its variants like terminal tax or terminal poll) is collected through check-posts, the entry tax is account-based. There are indications that the changeover would result in a loss of municipal revenue, but the removal of internal barriers to commerce is advocated on grounds of overall economic efficiency. In any case, the future prospects of increased municipal revenue on this score is limited.

Non-tax Revenues

Apart from specific service taxes, there are also user charges on

various urban services based on consumption or its surrogates. Recent attempts by Bombay to increase its water rates substantially is a pointer to the future efforts in that direction by other municipal authorities. However, consumer resistance is accompanied by increased charges, unless there are corresponding improvements in service provision. The *quid pro quo* rule in municipal charging compels the municipal authorities to be more efficient as well as responsive.

Another area where such charges could be introduced is for removal of market refuse. Already a city like Calcutta has substantially increased its collection charges for market refuse which other municipal authorities could profitably emulate.

Charging for motor parking in the congested areas of the large cities also has good prospects, as experienced in Calcutta where actual collection is done through commission agents.

The proportion of non-tax revenues to total municipal revenue comes to about 15 per cent. In future, attempts will have to be made to substantially increase the contribution from this source (to say, 25 per cent) so that the revenue loss due to inelasticity of municipal taxes can be compensated through increased reliance on user charges.

Enterprise Profits

The off-repeated hope of the Indian policy makers that the municipal authorities would be able to generate resources through remunerative enterprises, as in many socialist countries, has largely proved to be a non-starter. The only successful attempts in municipal commercial activities are reported from Kerala. There are political constraints in enterprise management under the municipal (or government) system in matters like staff recruitment, tariff fixation, product-mix, and subsidised or free service provision. Apart from these, the potentially profitable areas for public enterprises are under state governments through nationalisation (electricity, transport, gas, milk supply, etc.). The only areas left open to the municipal authorities are urban redevelopment and markets. Here also it is found that appropriate municipal-private cooperation arrangements might be more advantageous than working through traditional municipal undertakings.

PRIVATE AND COMMUNITY PARTICIPATION

Privatisation and community self-help are two ways of financing civic services and, thereby, relieving the municipal authorities from undertaking tasks which could be better performed either through the operation of the market or with the help of community groups.

Privatisation Prospects

The prospects for outright privatisation of municipal services in India are not quite obvious as the municipal authorities undertake very few market-related activities. On the other hand, there are prospects for joint or cooperative action between the municipal authorities and the private sector in real estate development. In Calcutta there is a recent thinking to involve private investors in redeveloping open spaces for creating integrated markets and community facilities. Where municipal authorities are undertaking city transport (Pune) or milk supply (Ahmedabad) consistently at a loss, there is justification to consider alternative forms of ownership, with or without municipal participation. However, even when a particular municipal service is operated through private management, the franchising method could be used to retain municipal control over such transferred services. Once a municipal utility service is wholly privatised, the regulatory powers of the state government may have to be invoked to ensure proper control of quality and tariffs of such undertakings.

Community Efforts

India has had a fairly long experience of urban community development and voluntary social work. Experience suggests that although it is possible to mobilise community contribution to build schools, dispensaries, community halls, etc., it is their maintenance and the actual provision of social services which call for recurring municipal assistance. There are, however, instances of self-paying community facilities, like pay-toilets, in cities as diverse as Patna and Madurai. Community workers could be utilised by the municipal authorities at a fraction of the cost of the municipal bureaucracy. As in the case of market services, in the community-based services also there is a scope for municipal-community cooperation. Examples of such cooperation abound, and these are quite common in states like Gujarat or Maharashtra, where the voluntary associations are active and are also respected.

CENTRAL AND STATE SUPPORTIVE MEASURES

The central and state governments have a major role through institution building, transfer system, and technical assistance in helping the municipal authorities in their resource mobilisation efforts. These three types of supportive measures are discussed below.

Institution-building

At the central-level, specific financing agencies are being created in the fields of housing and urban infrastructure. When in operation, the municipal authorities would be able to avail of the enhanced institu-

tional finance for investment in shelter provision and urban infrastructure.

At the state-level, the newly created metropolitan and urban development authorities may involve the municipal authorities within their jurisdiction in a planned municipal development programme, as has happened in the Calcutta metropolitan area. So far, these specially-created authorities have bypassed the municipal institutions in urban development, but have experienced difficulty at the time of handing over the assets to the latter for maintenance. With the proposed creation of the central financing institution for urban infrastructure, it is possible that the municipal authorities may be directly involved in investing in urban development which is in tune with their servicing capabilities.

Transfer System

State grants to the municipal authorities in India constitute about 20 per cent of municipal revenue. There are variations among the states in their attitude towards such grants. For instance, in the states of Gujarat and Maharashtra, the municipal corporations are supposed to be financially self-reliant owing to their larger tax powers. On the other hand, there is no such distinction made in the state of West Bengal where the municipal corporations are relatively more favoured by way of state grants, as compared to the other municipal authorities. Barring a few states like Gujarat, Kerala and West Bengal (for the Calcutta metropolitan area), there is no clear policy of state grants to the municipal authorities. Gujarat state has an elaborate grants-in-aid code, but the quantum of such grants is not substantial. Its general grants are based on a *per capita* formula, which is inversely related to the size of the municipal councils. The major weakness of this grant is that the overall municipal fiscal capacity and tax efforts are not directly linked with the grants formula.

The state of West Bengal has recently (1984) introduced a revised grants structure (RGS) for the municipal authorities in the Calcutta metropolitan area, at the instance of the World Bank. The RGS ensures that the normal municipal expenditure needs are met through a performance-related grants system; at the same time, lack of municipal tax effort is penalised by cutting back development assistance, while above-average tax effort is rewarded through additional loan assistance for development purposes. In course of time, the RGS may be transformed into a full-fledged formula-grant which would integrate both the general-purpose and the untied capital transfers.

Technical Assistance

There are a few notable efforts in making technical assistance to the municipal authorities available through specially-created organisations

by a few states. For instance, technical assistance in project appraisal is provided to the municipal authorities in the states of Gujarat (Municipal Finance Board) and Kerala (Urban Development Finance Corporation), along with development finance. In the state of West Bengal, a Central Valuation Board has been created to undertake valuation of urban real property for municipal taxation. Similarly, the state public health engineering departments have long been preparing water supply and sewerage projects for the municipal authorities at a nominal charge. There is no doubt that the scope for such technical assistance needs to be widened to include budgeting, legal and planning problems that the municipal authorities face.

CONCLUSION

Municipal resource mobilisation prospects in India do not appear to be bright mainly due to uncertainties surrounding its constitutional and political status. While the municipal governments are granted nominal autonomy, their effectiveness is limited due to unprincipled supersession, erosion of functional domain, poaching of tax field, and uncertainties in transfer arrangements. The situation could be improved if municipal government is granted suitable constitutional protection. Alternatively, as in the case of rural local government, there has to be fiscal integration between municipal and state governments. Under either of the two options, central government participation in municipal finance through tax-sharing and transfers seems essential.

The second problem surrounding augmentation of municipal revenues is its extremely narrow tax-payer base and its large proportion of free-riders among the citizenry. With the impending abolition of octroi, this problem is likely to be accentuated. A search for alternative municipal tax sources is, therefore, essential to maintain municipal fiscal equilibrium. Two likely candidates in this regard are: (a) the taxes on professions, trades, callings, and employment (in the larger municipal authorities), and (b) the capitation or poll taxes (for the smaller ones). These taxes would obviously need appropriate modifications for effective utilisation in the municipal sphere. □

Why Reform Local Government Finance in Britain?

IAN BLORE

BRITAIN IS about to enact the most far-reaching reform in its local government finance, some would say in local government itself, for several centuries. Business property tax is to be centralised. Domestic property tax which imperial Britain exported to countries that now constitute almost one quarter of mankind is to be abolished. Since India is one of those ex-imperial countries that inherited a property tax system modelled on the British system, the reasons and the possible consequences of the British reforms are of interest to India as a recent article in *Nagarlok*¹ conceded. That same article clearly summarises the reform proposals. Apart from indicating some slight changes to the proposals that have been subsequently adopted, this article will not recover the same ground. It will instead view the problems of the present local government finance system as perceived by the present government; attempt to explain the government's intent in adopting the reforms in their present shape; and finally outline possible consequences of the new finance system. All three questions have political answers. Indeed as public finance, or 'political finance' questions, it could hardly be otherwise. Because of their roots in a particular political culture neither the perceived problems nor the shape of the reforms nor the possible consequences have much direct relevance to Indian conditions. The last section of this article questions whether there is any indirect relevance to Indian urban public finance.

THE PERCEIVED PROBLEMS

The overriding problem of local government finance in Britain, as perceived by the present central government and highlighted in the original 'Green Paper'² is that of rising expenditure. Between 1970 and 1986

¹Bhabatosh Datta, "Financing Local Government: A British Scheme", *Nagarlok*, Vol. XIX, No. 2, April-June 1987, pp. 29-40.

²Green Paper on *Paying for Local Government*, Comnd 9714, Her Majesty's Stationery Office, London, January 1986.

local government current expenditure rose from 6 to 8 % of national GDP. (Interestingly central or general government expenditure rose in the same period more rapidly from about 41 to 48 % of the GDP). In the 1987-88 financial year, local government relevant (or current plus ongoing capital) expenditure is expected to be about 28 billion sterling. Almost half of this is for education; other major spending functions include law and order, housing, social services and transport. That expenditure which is financed publicly is resourced by central government grants (46 per cent of the total), tax on business property (28 per cent) and on domestic property (24 per cent). Of each one pound of increased expenditure therefore only a small part, or roughly 24 pence, may possibly be borne by the local domestic taxpayer. The effect is to limit the degree of accountability for local spending decisions by local government to local residents.

For a decade between 1976 and 1986, central government attempted to arrest the growth in local government expenditure by a mixture of controls, penalties and cuts in central grants. The results were mixed. Limiting central grants shifted the burden of marginal increases in expenditure to business and domestic property taxpayers, and to a very limited extent, fee and charge payers. This may have been expected to increase the accountability of local government to its local constituents but for two factors:

- business taxpayers do not have a local vote, and
- many residents are effectively exempt from payment of domestic property tax.

Businesses did possess a local vote in Britain until 1948, although this was contrary to accepted democratic principles. Since then, business could use only its local influence or its influence on central government.

The effective exemption of many domestic residents from property tax is through the system of rate rebates. In 1984-85, 15 per cent of householders received a full rebate and a similar number received a partial rebate, leaving only about 70 per cent paying in full. In some inner city authorities in which there are high concentration of poor people receiving rebates, the proportion paying full rates may be as low as 30 per cent. Further more these proportions are of householders only. Out of about 35 million electors in Britain, only 18 million are householders liable to pay property tax. The remainder are spouses or dependents. If the principle of "no representation without taxation" is adopted as a criterion of accountability as the present government appears to have accepted, then the proportion of full taxpayers to local

electors which may be as low as 15 per cent in some extreme, mainly city, cases, poses a problem of accountability. The argument which the 1986 Green Paper proposes is that these low proportions of local taxpayers to local electors lead to election of local councils committed to raising expenditure which is then borne by minority or unrepresented groups of domestic and business ratepayers. This view was originally argued by the Adam Smith Institute.³ The argument is given some substance by the control of most city or metropolitan councils by the Labour Party which tends to be in favour of greater public including local expenditure. In a tiny handful of these city councils groups of leftist councillors have expressly used increased expenditure as a means to confront the government and business. It may be, therefore, that the promised drastic reforms of the entire local government financial machine is directed at a few aberrant authorities. In order to be at all successful, however, the reform needs to change political behaviour. The government expects that it will do so in ways discussed below.

CHANGING PUBLIC CHOICES

The reforms consist of three elements as Bhabatosh Datta⁴ clearly outlines:

- (a) The central grant system is to be modified in a way which renders it elastic largely only to population.
- (b) The business property tax is to be centrally determined and then allocated on largely a population basis.
- (c) A community charge or poll tax is to be levied on every resident over the age of eighteen years, that is on every voter.

The package of reforms hang together but the intentions behind the first two elements (a) and (b) can be quickly discussed. By linking the elasticity of grant and business rates almost wholly to population, any discretionary increase in local spending will be borne wholly through the proposed community charge by local voters. The intended effect is quite complex as illustrated by Gibson⁵ but can be illustrated by the following Figure (on next page).

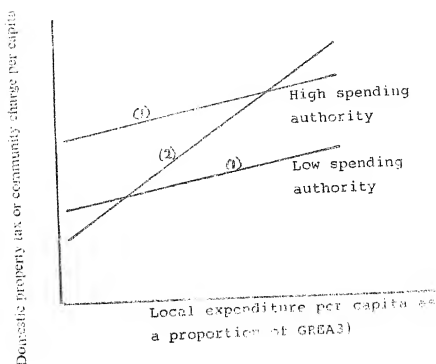
By increasing the responsiveness of domestic taxation, whether domestic rates or community charge, to spending as shown by curve (2) in the Figure the government intends that the 'marginal costs' be fully perceived.

³D. Mason, *Revising the Rating System*, ASI, 1985.

⁴Bhabatosh Datta, *op. cit.*

⁵J.G. Gibson, "The Reform of British Local Government Finance, An Evaluation", *Policy and Politics*, Vol. 15, No. 3, 1987.

FIGURE: RELATION OF LOCAL PER CAPITA TAX RATE TO
LOCAL EXPENDITURE PER CAPITA



SOURCE: Gibson, *ibid.*

- NOTES: 1. Under present system.
2. After proposed reforms.
3. Grant related expenditure assessment.

ved by domestic taxpayers. By extending the tax base as proposed to all local voters by a flat rate community charge, the intention is to make all voters equally aware of those marginal costs. The hope is that the voter will behave as a rational economic consumer of local government services and will weigh the marginal benefits of services against their marginal cost and then vote accordingly. The community charge, therefore, attempts to emulate a pricing system for local services by supposedly offering choices to the consumers of those services (voters) and by indicating their marginal cost (price). Hence the defence of the terms 'charge' as distinct from 'tax'.

This attempted emulation of a market system for local services is, however, crude and still collectivist. These inherent flaws may lead to consequences different from those expected by the proponents of the reform. These are discussed in the next section after the scenario expected by the advocates of such a community charge is sketched. The likelihood of either scenario being fulfilled is closely related to the voter perception of the community charge as a charge (price) or as a tax.

POSSIBLE CONSEQUENCES OF THE REFORMS

In 1990 (1989 in Scotland), Britain will have wholly replaced domestic property tax by the community charge. In the same year business rates will begin to be centrally determined and over a period of years will be equalised over the country. The new grant system will be similarly phased over a number of years. Very quickly, however, the effect shown in the Figure above will be apparent to voters as consumers of local services. For ever, extra discretionary pound of those local services each voter would theoretically pay an extra pound of community charge. If this were indeed to be so then there may be two long-term consequences both of which would fulfil present government objectives. They are either that:

- (a) no coalition of non-taxpaying voters would have the incentive of pressing for extra expenditure that did not yield greater marginal benefits than their marginal costs, or
- (b) if a private alternative to local authority provision of a service exists at similar marginal cost, voters may opt for that private supply.

As examples of either (a) or (b) personal social services and solid waste collection can be taken. Only if voters who consume social services were to believe that the benefits of a new or increased social service outweighed its extra cost would they favour it. Local public finance would no longer operate as a redistributive instrument since the poor recipient of the social service would pay its marginal cost. Similarly, if some voters wanted solid waste collected twice a week rather than once and an alternative private garbage collector existed and were to be competitive, they might opt for that alternative. Both these possible consequences should have the effect of constraining local public expenditure so long as the community charge remains a flat rate levy.

But the community charge as proposed is not a pure flat rate poll tax. First, very poor people on welfare supplementary benefit will be liable for only 20 per cent of the full charge. Secondly, many of these will be compensated initially by a rise in their welfare payments. It is the first provision that is important in the long-run. In essence, it concedes the ability-to-pay principle at least for a major section of the community such as many pensioners, the unemployed and others on supplementary benefits. This provision confirms at a stroke the community charge as a tax with two rates which are very crudely related to income. A levy which is compulsory and is partly related to ability-to-pay, however, crudely is likely to be rightly perceived as a tax whatever name it is given. And the public perception of the community charge

as a tax is likely to govern their behaviour towards it. That behaviour may be quite different to what the government may expect which is based on the public perception of the charge as a price surrogate as outlined above. If so, the consequences may be very different. Some possible consequences are worth noting.

Public behaviour towards taxation can be categorised by three ways in which the individual tax burden can be shifted:

- individual tax avoidance,
- individual tax evasion, and
- collective action to reshape tax incidence, most frequently by redistributive tax progressivity.

The proposed administration of the community charge allows all three methods to be pursued.

Tax avoidance would be difficult for most taxpayers. The only practical legal loophole is for people to opt for unemployment rather than to take a job. By so doing they would avoid at least 80 per cent of the tax liability. This effect may be limited but when added to many other disincentives to work—the so-called poverty trap—could be measurable.

Tax evasion likewise may be limited. It would be possible only by the technique of civic 'hiding'; potential taxpayers would refuse to register. Since there are to be checks against at least the electoral register such omissions to register for tax are also likely to incur a loss of voting rights. However, well-policed the tax were to be, such evasion could not be wholly eliminated. It could be quite marked in certain areas and amongst certain groups.

Greater progressivity could be imparted to the proposed community charge system by simply increasing the number of 'rates' that are applied and relating them directly to income rather than to welfare groups. This has been recently proposed privately by members of CIPFA.⁶

Such a banded community charge would be similar to local graduated taxes or levies in some African countries, for example, Uganda and Zambia. It is at least interesting to speculate whether a coalition of interests among the national public could be formed to alter the tax so as to allow for more income-related bands. If this were to happen then the same redistributive tendencies that the government is trying to curb in some local authorities would find a better tool for redistribution than the present property tax system. Such an outcome would be ironic indeed for the present British government.

⁶A. Travers and R. Hale, *Graduated Community Charge*, CIPFA, 1987.

SO WHAT FOR INDIA?

This article has concentrated on aspects of public behaviour and public choice rather than the mechanics of the reform proposals in Britain. It is precisely because the intentions of those seemingly dry proposals are to alter such public behaviour and its political outcome that their applicability elsewhere than in Britain is negligible as is perhaps implied by Bhabatosh Datta. The social and political cultures of India and Britain are so dissimilar that the problems of local government finance and any attempt to change them through subtly changing political pressures are bound to be very different.

But if the perceived problems of local government finance and therefore political attitudes to it do differ, there still may be some lessons to be learned from current British experience. First, there is the example of a country which has allowed its major source of local finance to ossify. Non-revaluation for many years (1973 was the last year in England and Wales when properties were generally revalued) can lead to such anomalies that property tax becomes open to attack by interested parties. Secondly, there is the need to balance social justice through redistributive tax mechanisms with some accountability to all voters. This is especially so for local taxes whose national redistributive impact may be limited. Thirdly, the importance of politics in public finance should always be considered. The very success of the campaign of the present British government against rates has depended on a coalition of interests opposed to the present system. But that success may be short-lived. If so, it will be largely because people do not behave wholly as rational economic units, in this case as consumers of local services, and that their behaviour may be impervious to bureaucratically-created mechanisms such as the community charge. Between intent and outcome is a long journey not entirely guided by economic assumptions. Let us wait and see. □

*An Application of Compromise Programming to Octroi Abolition Tangle**

VIVEK N. PATKAR

THE TASK of managing the urban problems is becoming more and more complex on account of rapidly expanding towns and cities and the emergence of various conflicts characterised by economical, social and political interests. In the prevailing milieu, decision-making in our country, generally, treads one of the following courses: (i) selective appeasement of involved parties, (ii) postponement of the issues, and (iii) waiting till the solution emerges on its own.¹ A natural consequence, more often than not, is the surfacing of the problem again and again with much more severity because the underlying conflict has not been resolved in the first instance.²

An examination of the urban problems like housing shortage, slum upgradation, transport, infrastructure and services provision, environmental degradation and so on, shows that besides the lack of resources, a failure to settle the basic issues due to following above mentioned decision-making approaches has contributed a great deal to the aggravated dimension of the problems. An outstanding issue of great significance to urban planning and finance which has remained unresolved in this respect, is the abolition of Octroi. In the last 50 years, this had been a subject matter of deliberations of innumerable committees and commissions and, even though, most of them were in agreement that Octroi should be abolished, none could suggest an implementable solution. Different aspects of this problem have been studied and reported in recent

*Views expressed here are those of the author alone and not of the organisation to which he belongs.

¹S. K. Modak and V. N. Patkar, "Autogeneration of Solutions to Societal Problems: Indian Example", *Human Systems Management*, No. 2, 1981, pp. 322-25.

²M. Zeleny, "Conflict Dissolution", *General Systems Year Book*, 21 1976, pp. 131-36; see also Zeleny M., in M. Zeleny (ed.), *Multiple Criteria Decision Making*, Springer Verlag, New York, 1974, pp. 153-206.

years,³ but the solution is still elusive.

It is thus felt that to end the reoccurrence of such issues, the application of recently developed techniques of n-person game theory, multiattribute utility analysis, multi-objective programming, etc., from the field of Operational Research/Management Science could be useful. One such technique known as compromise programming seems more promising. It tries to generate a solution which would be acceptable to all the parties involved. In this paper, an attempt is made to apply compromise programming to Octroi abolition problem situation in Maharashtra, where it took a serious turn a few months back when an indefinite strike to abolish this tax was launched jointly by the commerce, trade, manufacturing and goods transport industries in the state.

PROBLEM BACKGROUND

Right since the formation of the state in May, 1960, the question of abolition of Octroi and introduction, in its place, a suitable alternative source of revenue for local bodies has engaged the attention of the Government of Maharashtra. A Study Group on Octroi was set up in May 1963 and after extensive study, discussions and weighing different alternatives it submitted a report in June, 1970. The report formulated an elaborate scheme of levying 'surcharge on sales tax' to replace Octroi whereby the anticipated future revenues of local bodies are ensured, on one hand, and the burden on trade and industry is also not adversely increased on the other.⁴ However, the recommendations were not implemented for one reason or the other.

It is very pertinent to see the rapid rise of the complexity of the problem. In Maharashtra, the local bodies are of four types, viz., Municipal Corporations, Municipal Councils, Zilla Parishads and Village Panchayats and most of them have been collecting Octroi. The growth of these is given below:

Year	No. of Local Bodies	Gross Octroi Collection (Rs.)
1938-39	55	37,90,400
1951-52	96	3,48,70,300
1951-62	223	6,86,67,300
1968-69	312	24,12,53,000

³M. Bhatt, "Is There a Case for Abolition of Octroi?", *Nagarlok*, Vol. IX, No. 4, 1977; see also A. Datta, "Abolition of Octroi and Compensation to the Local Authorities", *Nagarlok*, *op. cit.*, pp. 61-65; Government of Gujarat, *Report of the Gujarat Taxation Enquiry Commission*, 1980; Government of Maharashtra, *Report of the Study Group on Octroi*, 1971; see also V. Pillai, "Octroi Taxation: A New Economic Rationale", *Nagarlok*, *op. cit.*, and M. G. Rao, "Fiscal Alternatives to Octroi" *Nagarlok*, Vol. XIII, No. 2, 1981, pp. 28-33.

⁴Government of Maharashtra, *op. cit.*

The growth in number of local bodies has now practically stopped but the rise in Octroi collection is phenomenal. The following figures for the year 1984-85 indicate a multifold increase in Octroi revenue of the selected municipal corporations:

	Rs.
1. Municipal Corporation of Greater Bombay	177,02,00,000
2. Pune Municipal Corporation	19,25,00,000
3. Thane Municipal Corporation	16,44,21,000
4. Kalyan Municipal Corporation	5,70,43,000

It is observed that for many of the local bodies, Octroi now constitutes more than 50 per cent of their total revenue. Some bodies levy Octroi on weight-basis while others levy on *ad valorem* basis for the goods coming in their jurisdiction for consumption. In Maharashtra, about 14,000 employees together in all the local bodies are on Octroi collection duty and out of these, approximately 2,000 belong to the Municipal Corporation of Greater Bombay alone.

A natural consequence of such expansion is the development of various interests within the local bodies to continue this practice of collecting and controlling a large fund. The trade and industry have been representing to either withdraw or modify the principle and procedure of collecting this tax so that currently observed malpractices and harassment could be eliminated to a great extent. So, in response to the strike launched in Maharashtra in May 1987 by trade and industrial establishments, the State Government announced the abolition of Octroi in one year time and appointed a committee to suggest the suitable measures. It is, however, not clear how the solution to this lingering issue will be implemented in a much more complicated scene now prevailing when similar attempts in the relatively less complex situations in the past have failed. In fact, a totally new dimension to this situation was added when all the municipal employees of the state went on a strike for one day in June, 1987 to oppose the abolition of Octroi on the ground of a threat to some of their jobs.

It is obvious that a workable solution will be only that which is a golden mean, i.e., a solution which serves the interest of everyone, at least partially, and nobody perceives that others are gaining at his expense. The application of compromise programming to this problem is

presented in the following pages to illustrate the approach required for coping with such situations.

MODEL STRUCTURE AND SOLUTION

Basically, the Octroi abolition conflict is now characterised by four parties, viz., local bodies, industry, state government and municipal employees union, not being able to come to a consensus about selecting one among many solutions offered. The compromise programming technique captures the evaluation of each solution by all the parties and generates a set of compromise solutions from which an acceptable solution to all can be obtained.

In real life, the above mentioned four parties consist of further sub-parties with varying interests. Thus, we have considered the following parties and possible alternatives in our model:

Party

- P1 : Municipal Corporations
- P2 : Municipal Councils
- P3 : Zila Parishads
- P4 : Village Panchayats
- P5 : Trade, Commerce and Manufacturing Industry
- P6 : Goods Transport Industry
- P7 : State Government
- P8 : Municipal Employees Union

Alternative

- A1 : Abolition of Octroi tax at Zila Parishad and Village Panchayat levels
- A2 : An additional one point sales tax at a flat rate
- A3 : Proportionate surcharge on the present sales tax
- A4 : Multi-point turn-over tax at a flat rate
- A5 : Some other tax to be levied by local bodies
- A6 : Modification of the existing Octroi collection method

Model I

The first step is to know the preference of each of the party about the listed alternatives. This can be simplified by asking the party to rank the six alternatives by giving the rank 1 to the most preferred one, rank 2 to the next preference and so on. To illustrate the method, a hypothetical preference structure is given in Table 1.

TABLE 1

Party→ Alternative ↓	P1	P2	P3	P4	P5	P6	P7	P8
A1	2	3	6	6	4	5	4	6
A2	4	6	4	5	1	3	2	5
A3	5	4	5	4	2	2	1	3
A4	6	5	3	3	3	1	3	4
A5	1	1	2	2	6	6	6	1
A6	3	2	1	1	5	4	5	2

It can be seen from Table 1 that each party has ranked the alternative differently taking into account the respective interests. Naturally, the interests are conflicting and had there been an *ideal* alternative, it would have received the rank 1 by all the parties. Therefore, in order to get a solution which is as close as to the ideal alternative, it is necessary to evaluate the distance of each of the ranking of proposed six alternatives from the ideal. One of the easiest measures to achieve this is the following:

$$m_j = \sum_{i=1}^8 (p_{ij} - p_i^*) \quad j = 1, 2, \dots, 6$$

where p_{ij} denotes the rank given to the alternative j by party i and p_i^* is the rank given to the ideal by party i .

Now, in our case, $p_i^* = i$ for all i and thus, by subtracting 1 from all the entries in Table 1 and summing up over the rows, m_j can be obtained as in Table 2.

TABLE 2

Party→ Alternative ↓	P1	P2	P3	P4	P5	P6	P7	P8	m_j
A1	1	2	5	5	3	4	3	5	28
A2	3	5	3	4	0	2	1	4	22
A3	4	3	4	3	1	1	0	2	18
A4	5	4	2	2	2	0	2	3	20
A5	0	0	1	1	5	5	5	0	17
A6	2	1	0	0	4	3	4	1	15

The six alternatives as ranked in descending order of preference to

reflect the increasing value of the distance m_j are: A6, A5, A3, A4, A2 and A1. It is to be noted that this particular ranking which would correspond to the column

$$\begin{bmatrix} 6 \\ 5 \\ 3 \\ 4 \\ 2 \\ 1 \end{bmatrix}$$

has not been proposed by any of the eight parties individually in Table 1. This very fact could increase the chances of the acceptance of the above solution by all the parties because no party has to accept another party's ranking in direct manner.

Model II

A different approach to arrive at a consensus could be to generate a ranking which would differ from the available rankings as little as possible and thereby eliminate the concept of an ideal alternative. This in mathematical terms reduces to the problem of finding a median ranking p_j^m so that overall measure of distance,

$$s = \sum_{j=1}^6 \sum_{i=1}^8 |p_{ij} - p_j^m|$$

is minimized.

In our case p_j^m can be equal to only one of the $k=1, 2, \dots, 6$ and thus if $p_j^m = k$, we can define

$$s = \sum_{j=1}^6 s_{jk} = \sum_{i=1}^8 |p_{ij} - k|, \quad k=1, 2, \dots, 6.$$

In short, first, the number 1 is to be subtracted from all entries in Table 1 and a summation over rows of the absolute value of differences is to be taken to compute $s_{11}, s_{21}, \dots, s_{61}$. The same procedure is to be repeated by subtracting 2 from all the entries in Table 1 to obtain $s_{12}, s_{22}, \dots, s_{62}$ and so on till $s_{16}, s_{26}, \dots, s_{66}$ are computed. These values of $s_{jk}, j, k=1, 2, \dots, 6$ are given in Table 3.

TABLE 3

Rank→ Alternative ↓	1	2	3	4	5	6
A1	28	20	14	10	10	12
A2	22	16	12	11	12	18
A3	18	12	10	10	14	22
A4	20	14	8	11	14	20
A5	17	15	17	19	21	23
A6	15	11	11	13	17	25

Now in Table 3, our objective is to match alternatives with rank numbers so that the sum of the corresponding assigned distances s_{jk} is the smallest. This problem belongs to the class of well known 'assignment problem' of linear programming and can be very easily solved (Ref. 5). The compromise solution is thus found to be—A5, A6, A4, A3 A2 and A1, in decreasing order of preference. This is again a new solution not proposed by any party and also differs from that found by the Model I.

It is worth mentioning that many a times, on solving the assignment problem, a few alternative solutions are available and, thus, a wider set of compromise solutions is offered to choose from.

DISCUSSION

A compromise solution has to be such that everyone thinks of having received the largest benefit. The main advantage of compromise programming as described here lies in its transparency, *i.e.*, the parties can either inform their ranking of alternatives individually or can sit around a table to decide. The coordination committee or agency can then process this information in the framework of model I or model II and put forth the possible compromise solutions for consideration. The debate and discussion centered on those will therefore be more pointed and meaningful to arrive at a consensus. Such a solution can be expected to be relatively more durable because each party knows the disadvantage of not sticking to it. In a democratic set-up, this approach seems to be worth pursuing.

The ease of computation and interactive nature are the added advantages of compromise programming and it could be refined in light of the experience gained from real life applications. There is no denying of the fact that to dissolve the conflict completely, invention of an ideal solution is essential, but till then, compromise programming solution is the way out.

CONCLUSION

The Octroi abolition problem amply illustrates the need to resolve the problems at the initial stage so as to avoid facing it in more complex form at a later date. This warning should not go unheeded because, if, the problems of rapid urbanisation as witnessed in recent years are not tackled at this juncture, it would be almost impossible to avoid a future catastrophe.

A more frequent use of the analytical techniques like compromise programming should be made to supplement the efforts in resolving serious issues in an amicable and democratic manner. □

Complaint-Handling Institutions for Nigeria's Urban Places: A Proposal for Administrative Improvement

VICTOR AYENI

URBANISATION IS commonly believed to be a major challenge of the development process in Third World societies. Indeed, some scholars define it synonymously with development. However viewed, there is consensus that the effective and efficient management of urban centres constitutes an integral aspect of the responsibility of the development administrator.¹ We do know, of course, that side by side with the urban centres are numerous rural places which in themselves represent potential centres of urbanisation and or sources of migrants to the existing cities and metropolis. For this reason, then, the management of urbanisation also implies the ability to develop rural areas and contain urban migration as much as possible.

Although now the focus of a distinct field of study, it is nonetheless not too far-fetched to present the urbanisation problem as the focal point of scholars of Third World Public Administration in general.² It is in the urban system that one finds one of the finest crystallisation of the numerous administrative difficulties in these societies. For instance, the kaleidoscopic nature of the urban society appreciably depicts the dynamics of its larger environment. So also, do the typical urban resident and migrant from the rural area, their demands, aspirations and conflict in world-view portray the make-up of the average Third World citizen.

This article is set against the foregoing observations, and seeks to

¹For an introduction to the relationship between urbanisation and development see, A. L. Mabogunje, *The Development Process: A Spatial Perspective*, (London, Hutchinson, 1980). Also, J. Gugler and W. G. Flanagan, *Urbanisation and Social Change in West Africa*, London, Cambridge University Press, 1978, for an elaboration on the character of Third World urbanisation problem.

²See H. A. Green, "Is Urban Administration Different"? *International Review of Administrative Sciences*, 4, 1975.

discuss the main conclusions which derive from them. First, is the multi-dimension nature of the urban environment, particularly in regard to the socio-psychological and physical sophistication that tends to be associated with it. The urban setting is very dynamic, and at the same time poses to be an intractable one. The second conclusion develops from this first one and relates to the form of administrative and organisational capability consistent with the character of the urban problem. The urban administrative process needs to be attuned to the dynamism and sophistication of its environment. It must be able "to provide essential services and simultaneously exploit the psychological and material capabilities of the urban inhabitant to contribute (morally and financially) to the provisions of these services and thus benefit both rural and urban places".³ This clearly calls for an arrangement, peculiar and distinct, from what ordinarily would be required in a largely rural, more traditional and less development-oriented situation.

This article attempts a discussion of the main rationale and features of one aspect of the basic elements of an urban administrative system. The thesis of this paper is that urbanisation calls for a clear, central recognition of complaints handling in the administrative process. Unfortunately, however, most urban centres, particularly in Nigeria, pay, at best, lip-service to this fact. Consequently, they are generally poor detectors of employees' and 'clientele' demands. This, invariably, could subject the administrative system to stress and instability.

We shall demonstrate this thesis in four parts. In the following section, we shall briefly outline the main features and characteristics of urbanisation in developing countries. From this we hope to identify those attributes of urban places that impel complaints and complaints handling mechanisms. In the second part, effort is made, both conceptually and empirically, to demonstrate the essential role of complaints handling instruments in the urban administrative process. In this section too, we review some of the existing mechanisms for treating complaints in Nigeria's urban places. The third section presents a set of proposals for improving existing practices in Nigeria. The fourth and final section concludes the article.

THE NATURE OF URBANISATION IN DEVELOPING COUNTRIES

Urbanisation is an immediate and rapidly growing problem in most part of the Third World. And there is clear indication that its pace will continue to accelerate in the years to come. Taking the Nigerian situation, urbanisation can be depicted as the demographical and

³C. A. B. Olowu, *Local Government and Urban Administration in the Lagos State 1968-78*, Ph.D. thesis, Ile-Ife, University of Ife, 1979, p. 12.

physical growth in towns and cities. Because of the colonial origin of this trend, most observers believe that the urbanisation process in Nigeria has an intrinsic western orientation to it and thus is inseparable from the country's overall modernisation effort.⁴ Urbanisation in Nigeria means severe conflict between traditionalism and the drive, (supposedly misplaced), towards modernity. This is a fact easily noticeable even in the physical environment of the so-called major urban centres in the country.

Scholars have attempted to itemise the various concomitants of urbanisation in Nigeria. The most obvious is heavy and rapid population growth. Urbanisation in Nigeria also suggests an income skewedness in favour of the urban areas and a disproportionate share of public and social services. This partly explains the massive exodus of people from the rural to the urban centres.

Also associated with Third World urbanisation is the phenomenon Bert Hoselitz has described as 'over-urbanisation',⁵ and Akin Mabogunje as 'parasitic urbanism'.⁶ This refers to a situation in which many people live in urban areas than the economic conditions can justify in a particular country. This phenomenon is consistent with the fact that major cities in Nigeria are primarily centres of administration, commerce, trans-shipment and even agriculture rather than of industrialisation⁷. All said, the character of urbanisation in developing countries is significantly different from that of the developed world.⁸ The problems which ensue are consequently also different, with those of Third World countries of a much more complicated and intractable form.

The urban challenge in developing countries is a complex, intertwined

⁴D. Olowu, "Twenty Years of Urban Administration in Nigeria" in L. Adamolekun (ed.), *Nigerian Public Administration, 1960-1980: Perspectives and Prospects*, Ibadan, Heinemann, 1985, p. 168. Also see D. Apter, *The Politics of Modernization*, Chicago, University of Chicago Press, 1967 for a characterisation of this Western orientation.

⁵B. F. Hoselitz, "Urbanisation and Economic Development in Asia", *Economic Development and Cultural Change*, 6, 7, October 1957.

⁶A. L. Mabogunje, *Urbanisation in Nigeria*, London, Oxford University Press, 1968, p. 313.

⁷Some scholars, however, reject this form of description of urbanisation in developing countries as culturally biased towards the West. See C. A. B. Olowu, "Local Government and Urban Administration..." *op. cit.*, p. 36, for a review of these objections. But over and above the fact that current socio-economic realities challenge the wisdom of this characterisation, it is plausible to argue that the root of Third World Urbanisation, going by Claude Ake's thesis of intellectual imperialism, lies in the Western orientation of urban policy analysis. See Ake's *Social Science as Imperialism*, Ibadan, Ibadan University Press, 1979.

⁸This point is underscored in all the literature. See, for instance, A. Adedeji and L. Rowland (eds.), *Management Problems of Rapid Urbanisation in Nigeria*, Ile-Ife, University of Ife Press, 1984, for a sharp articulation of it.

and pressure-packed phenomenon. Indeed, it poses countervailing tendencies. Thus the pursuit of a two-fold administrative strategy has come to be widely accepted as desirable.⁹ Harry Green expatiates:

On the one hand, there appears the need for a more rational resource-allocation system to manage the urban crisis more effectively while on the other, there is a need for more decentralised participation to influence the decisions of the resource allocation system. One is a typical managerial approach while the other is typically political!¹⁰

One approach is the observe of the other, and running through both of them is, among other things, an intrinsic recognition of the need for effective communication and information system in urban place. Effective urban administration implies integrated and comprehensive planning,¹¹ political participation¹² and reasonably elaborate bureaucratic machinery for implementation.¹³ Each of these underlines the need to improve communication between urban government authorities and residents of their areas. There is constant need for fresh demands and information as well as feedback on the impact of government's policy outputs on residents. Complaints handling instruments emerge as a mechanism for responding to a unique aspect of this need.

The bureaucratisation of urbanisation, simply used here in a Weberian sense to mean the dependence on rational bureaucratic organisations, introduces a very critical dimension to the need for complaints handling in urban places. Two aspects of Third World urbanisation accentuates the dependence on bureaucratic organisations.

The first is its western orientation. By this, Third World urban places have become drawn into the historical process on which Max Weber predicted his thesis. For Weber, the development of Western capitalism, industrialisation and urbanisation are part of the same historical process in which rational bureaucratic organisation inevitably becomes the

⁹Most students are also in agreement there. For a summary of this proposal see, *Ibid.*, p. 45, as well as H. A. Green, "The Managerial Challenge of Urban Development in Nigeria: An Introduction", *Quarterly Journal of Administration*, Vol. X, No. 4, July, 1976).

¹⁰*Ibid.*, pp. 359-60.

¹¹For elaboration see, A. Adedeji and L. Rowland, *op. cit.*, pp. 38-55; E. O. Adeniyi, "The Management of Urban and Regional Planning", *Quarterly Journal of Administration*, Vol. X, No. 4, July 1976.

¹²For an introduction to this concept see, J. L. Finkle and R. W. Gable (eds.), *Political Development and Social Change*, New York, John Wiley, 1971, Chapter Twelve.

¹³See for examples, M. Albrow, *Bureaucracy*, London, Macmillan, 1970; and P. M. Blau and M. W. Meyer, *Bureaucracy in Modern Society*, New York, Random House, 1971.

main machinery of social organisation.¹⁴ It may be argued that Third World historical development is not a perfect replica of the West.¹⁵ However, the implication of this for developing countries is not in lessening the prevalence of bureaucracy but in enhancing it. For, it seems that developing countries have in their imitation of Western historical process, become mere bureaucratic profligates.¹⁶

And secondly, the pressure (in terms of size, sophistication and expertise) on urban administration in developing countries for the provision of various social and public services makes bureaucracy indispensable. These services can neither be meaningfully planned nor provided without some organised bureaucratic methods. And generally, the more these services are desired, the more the need for bureaucratic organisations. Urban administration finds bureaucracy not only relevant to the implementation process, but for planning and formulation of activities as well. No doubt, urban scholars recommend less bureaucratic, more participatory planning strategies for urban planning.¹⁷ But the reality of the situation is that meaningful participatory planning is unlikely without necessary inputs from some bureaucratic mechanism to service the planning body. A typical illustration of this dilemma is the gathering and preservation of information. The information which gets fed into the urban place tends to be too enormous and complex for the planning body to deal with directly and thus there is need for some organisational arrangement to collate and simplify the pieces of infor-

¹⁴Max Weber, *The Theory of Social and Economic Organisation*, translated by A. M. Henderson and T. Parsons, New York, The Free Press, 1947; J. F. Finkle and R. W. Gable, *op. cit.*, Chapter seven. This assertion is accepted to be valid irrespective of ideological disposition. Indeed, a group of scholars referred to as the convergence theorists have come up with the argument that bureaucracy and bureaucratic administration represent an inevitable meeting-point for capitalist and socialist ideologies. Although critics of this theory, especially the Marxists, reject the fact that Marxism may ultimately be transformed, the realities of current management practices even in communist countries reveal a great deal of borrowing from the West. This is of particular interest to this study because complaints handling instruments are of universal necessity in modern management practices. See footnote 42 below. Also; H. Jacoby, *The Bureaucratization of the World*, Berkely, California, University of California Press, 1973; and V. Subramaniam, "Marxists and Management Theory: The Dilemma of Ideology Versus Expediency", *Seminar Paper*, Number 4, Department of Public Administration, Ife-Ife, University of Ife, March 1980.

¹⁵For a development of this argument see, V. Ayeni, "Introduction: Traditional Rulers in a Period of Transition" in O. Aborisade (ed.), *Local Government and the Traditional Rulers in Nigeria*, Ife-Ife, University of Ife Press, 1985.

¹⁶This assertion is demonstrated in V. Ayeni, "Nigeria's Ombudsman System: An Insight into the Problem of Bureaucratization in a Developing Country", *Public Administration and Development* Vol. 7, No. 1, 1987.

¹⁷See, for example, Adedeji and Rowland, *op. cit.*, pp. 49-55.

mation for the use of the planners.¹⁸

All said, urban management depends squarely on bureaucratic organisations and those who operate them. Naturally this dependence confers power, defined as control, authority and influence, on bureaucrats and generates deep concern about what Lord Acton has described as the corrupting influence of power.¹⁹ The corruption of bureaucratic power, as experience has shown, is manifested in three broad forms. First, it manifests at a personal level as, for instance, in a situation of official mistake or a bureaucrat is exaggerated sense of importance. The second and third characters take the form of 'under-organisation' or 'over-organisation' in which cases rational bureaucratic principles are either under or over applied. The former is portrayed by such acts as nepotism and the latter redtatism.

The consequences of these for the urban citizen are obvious. In the first place, he is subjected to bureaucratic abuse of official position for selfish ends. Secondly, in the event of conflict arising between the citizen and bureaucracy, the former finds himself totally helpless in the face of the latter's pervasive influence. And thirdly, the efficiency and effectiveness of bureaucracy invariably become eroded when bureaucrats succeed to totally insulate themselves from public accountability and responsibility.

Urban bureaucratisation has in it, then, the seed of self-destruction. If inappropriately pursued, urban bureaucratic organisations can become persistently subjected to stress and instability and may ultimately break down. If we take this fact together with the psychological build-up of the typical urban personality, an even more brittle administrative process emerges. The urban personality aggravates the inherent stress in urban bureaucratic administration.

It is commonly agreed that urbanisation breeds more enlightened, more informed and less tolerant persons than normally reside in rural areas²⁰. The urban person tends to be more alert to and restless in defending his rights. He is, therefore, bound to be very insistent on an accountable and democratised administrative process with effective participatory and communication mechanism structured into it. To the extent that complaints handling instruments contribute to the actual realisation of this model of the administrative process, they are inevitable in Third World urban places. What precisely does an urban complaints handling instrument look like?

¹⁸The point being made here is not new in decision theory. Essentially, it is an elaboration of the inherent limitations in rational decision making. See K. J. Arrow, *The Limits of Organisation*, New York, Norton, 1974.

¹⁹D. M. Pickles, *Introduction to Politics*, London, Methuen, 1970, p. 30ff.

²⁰J. Gugler and W. G. Flanagan, *op. cit.*, confirm this impression.

THE URBAN COMPLAINTS HANDLING SYSTEM

Complaining is an intrinsic attribute of human interaction. It inescapably arises in every human organisation. As used in this study, a complaint (synonymous with grievance)²¹ is an expression of grief, pain or resentment towards services or opportunities, provided by an urban authority. Amongst other things, it can be directed against the standard and procedure of provision of a service, the persons involved in its provision, the implementation of a policy or even, the policy itself. A complaint can emerge from an individual or group of individuals, from the public or from within a governmental authority, particularly its employees. It can be spoken or written, both of which can in some cases be accompanied by more dramatic expressions such as protest or demonstration. Often a complaint is preceded by symptoms. These include clientele withdrawal, neglect, indifference or, as in the case of employees, insubordination and decline in quality and quantity of work. It behoves the effective urban manager to correctly interpret these symptoms as manifestation of discontentment. There is, thus, in every complaint a deep-seated feeling of dissatisfaction and disappointment coupled with a demand for remedy, correction and or prevention of a future re-occurrence.

A complaints handling instrument is a means through which complaints are detected or registered for processing and resolution. Not all complaints handling means are directly involved in the processing of complaints. Some are simply complaints depot in the sense that they mostly serve as referral centres for receiving and storing complaints which are then passed on to other channels for treatment. An instrument's non-involvement in direct complaints processing does not, however, necessarily depreciate it. For one thing, the design of an instrument tends to be largely a factor of expediency. And in any case,

²¹Other concepts usually associated with complaint and grievance are 'appeal', 'petition'. The latter, for instance, is most customary in the civil service in Nigeria. Strictly speaking, appeal and petition are better associated with a situation in which a formal earnest request, a kind of written solicitation is made. Employees' complaints and grievances are pictured this way in the Nigerian civil service. The unfortunate aspect of this is the perpetuation of an image of an inferior subordinate with somewhat limited rights to grievance-redress. It is reflective of a philosophical disregard of complaints handling and a possible carry-over from colonialism. In systems (such as Nigeria) where the civil service is ubiquitous, other sectors, including urban administration are bound to be easily corrupted by this prevalent attitude to complaints generation in the civil service. See for examples, A. Iwajomo, "The Role of the Civil Service Commission in Complaints Handling in Ondo State" DPA Research Paper, Department of Public Administration, Ile-Ife, University of Ife, July 1985; H. J. Chudren and A. W. Sherman, Jr., *Personnel Management*, West Chicago, South-Western Publishing Co., 1976, pp. 409-413; and on the ubiquity of the civil service, see V. Ayeni, "Nigeria's Bureaucratised Ombudsman...", *op. cit.*

every complaints handling institution needs to be flexible enough to pass over detailed treatment of some complaints to others. One other feature of complaints handling institutions is the distinction between formal and informal channels. Formal complaints handling channels are established, legally recognised processes, while the informal ones are more casual temporary and lacking in legality.

The key, central role of an institution such as this in the urban situation is best depicted by a system, holistic analysis of urbanisation. Two particular features make the system approach very apposite here. First is the assumed inter-relatedness of the different identifiable components of the phenomenon under study. The second is that the system framework over-ambitious, as it would seem, enables one to incorporate less ambitious modes of analysis.²² On the basis of this, we can in conceptualising the role of complaints handling in the urban situation, combine the general input-output analysis with functionalism and communication theory.²³

The urban situation can be viewed as a huge dynamic system performing in accordance with the input-output model and on which various internal and external factors operate. There are three main points of analysis here: the identifiable elements of the system; relationships among the elements; and the boundary of the system. Let us begin with the latter. The urban system as depicted here can be delimited by its geo-demographic focus. That is, the geographical area, and population covered by a specific local government authority. This is a much narrower conception than the national urban system conceived of by Harry Green.²⁴ Other aspects of Green's urban system will, however, constitute the environment of the urban local government system conceived here. Our urban system is an open one which is influenced in various ways by the larger environment of which it is a part.

The urban system receives various inputs from its environment. These include resources, technology, demands and proposals. The outputs bore down to various policy measures. Internally, the system can be differentiated into a set of inter-related functional sub-systems which work on the various inputs and seek to convert them into outputs.

In processing its inputs, the urban system depends squarely on what

²²See R. E. Dowse and J. A. Hughes, *Political Sociology*, New York, John Wiley and Sons, 1975, p. 74.

²³For a comment on the possibility of combining these approaches see, G. D. Garson, *Handbook of Political Science Methods*, Boston, Holbrook Press, Inc., 1976, pp. 60ff. Some of our subsequent discussions are borrowed from this source.

²⁴H. A. Green, "Urban Management in Nigeria: A Systems and Organisational Approach", *Quarterly Journal of Administration*, Vol. X, No. 4, July, 1976.

John and Mary Miner call 'mediators'.²⁵ Mediators are to sustain or improve upon the original input so that the output comes as close to being maximized as possible. Mediators consist mostly of structural-functional units. And they serve to maintain system efficiency, productivity and maintenance. Two notable aspects of urban system mediators are important to us here. The first relate to the fact that the performance base of the urban system, like any other human system, is the large-scale, complex, formal organisation or bureaucracy. This complex organisation, as we have shown, play a central role in the internal conversion process. The urban administrative authority is the most appropriate representation of this in reality.

The other important aspect of the urban system is the communication subsystem. It is maintenance-oriented and functions with the application of control, monitoring and preventive in a process of information transmission from one medium to another. Thus, for instance, when the operation of part or all of the system falls below a certain level, or deviates too much from certain predetermined standards, corrective forces are activated, much as a thermostat serves to activate a heating system when the temperature falls below a present level.

It is in this way that the urban communication mechanism performs the function of system maintenance which functionalist theory recognises as central to it. There is need to add, however, that the system maintenance function of urban communication machinery is more structure-specific and particularised than is conceived in the strict functionalist sense. No doubt, the functional approach is concerned principally with system maintenance. But to it, this is a function inherent in all activities within the political system. According to Gabriel Almond, the performance of seven essential and universal political functions guarantees the continued existence of any political system.²⁶ In contrast, urban communication channels do not share the form of specialised system maintenance function which they perform with other structures in the system. Indeed, they work on other elements in the system, monitoring, integrating and cushioning them against stress in order to ensure overall system stability. The urban communication subsystem is probably best tagged a 'reagent of system maintenance'.

The ability of urban communication instruments to perform this function is enhanced by their structural form. The typical urban communi-

²⁵J. B. Miner and M. G. Miner, *Personnel and Industrial Relations: A Managerial Approach*, New York, Macmillan Publishing Co., Inc., 1977, Chapter three.

²⁶These functions are: Political socialisation and recruitment, interest articulation, interest aggregation, political communication, rule application and rule adjudication. For a review of Almond's and functionalist theory generally see, for instance, A. C. Isaak, *Scope and Methods of Political Science*, Illinois, The Dorsey Press, 1975, pp. 213-27.

ation subsystem forms a network of transmission lines intertwined with other mediators and elements in the urban system. Concrete illustrations of the different elements of this subsystem include language, the mass media, opportunities for labour-management interactions and complaints handling instruments. The last, undoubtedly, represents the most significant part of urban communication.

Like the larger system of which it is a part, the urban complaints handling machinery forms a system which in turn consists of a variety of instruments. These range from the legislature, the courts, the mass media, public spirited and influential individuals, governmental ombudsmen, to employees' grievance procedures and special complaint offices located within government departments. The list is endless. Although the actual number one finds is relative to the social setting in which one is interested, all systems accept the rule that a battery of instruments with varying potentials is best to deal with the multifaceted problem of bureaucratic control.²⁷

What must be emphasised is that ultimately, every urban complaints handling instrument functions as a system control and maintenance mechanism. It cushions the system against stress and disruption of its steady equilibrium state or 'dynamic homeostatis' as this is also known. To achieve this, complaint instruments perform a number of specific roles, such as:

- (a) Right wrongs suffered by citizens in interaction with urban bureaucracy.
- (b) Humanise urban administration.
- (c) Prevent abuses by acting as bureaucratic watch dog.
- (d) Serve as monitoring and evaluative medium for urban policies.
- (e) Integrate the diverse actors in the urban situation.
- (f) Lessen popular alienation from urban authority.
- (g) Vindicate urban authority and employees when unfairly accused.
- (h) Introduce in the long-run political and administrative reform.

The performance of these roles, either together or in bits, is aptly depicted in communication theory. According to this theory, information is the basic unit of analysis. This emphasises, in essence, the fact that communication is transfer of information. Information is viewed as a patterned relationship between events. N.A. Nwagwu adds that "a unit of information is the smallest fragment of knowledge which resolves

²⁷N. Johnson, "Defining Accountability", *Public Administration Bulletin*, December 18, 1974. See also S. Greer, et. al. (eds.), *Accountability in Urban Society: Public Agencies Under Fire*, London, Sage Publications, 1978.

doubt or uncertainty".²⁸ Information is what is received, analysed and reacted to. An urban complaints handling system, then, can be seen as a set of interrelated structures that receive an input of data (that is complaints) through receptors (such as complaints officials) and process this data by comparing them to memory and values (records, philosophy and tradition in the urban place) before submitting to decision. Given the location of the urban complaints system, input into it comes from two main sources: outside the larger urban system and from other elements within the system but external to the complaints system. In this way it is possible for an employee of the urban bureaucratic authority to complain just as any ordinary citizen.

Decision leads to storage of data in memory and, if appropriate, to implementation of decisions through effectors (usually complaints officials or bureaucratic agencies concerned.) This affects the environment beyond the sub-system boundaries (the larger urban system in this case), causing feedback as part of the data inputs of the next phase of input-transform-output process.

In effect, the main points at which the system makes its impact as a complaints handling mechanism are: its data storage unit; effectors; and feedback channel. With the first the system develops a repository of information through which the larger urban system is kept constantly up-to-date. The effectors ensure that the outcome of complaint-processing is implemented. For instance, the effectors see to it that individual wrongs suffered are corrected and remedied. The feedback channel maintains continuity and interaction between complaints, the complaints handling process and the targets of complaints. Thus, the complaints handling system is able to monitor citizens' attitudes towards urban governance, the quality of policies being implemented, as well as detect discontentment and potential sources of system breakdown. In this way, the feedback loop also helps to limit possible communication gaps between urban authority and citizens. It functions in this sense as an institution of public accountability.

Further complexity is introduced into an information model of urban complaints handling system with a number of other considerations. There could be over-load or under-load depending on the degree of environmental stress on the system. Information input may also contain unneeded information or noise (such as misdirected or unjustified complaints), situation which makes scanning and selection of data necessary before processing. This selectivity in turn introduces the possibility of perceptual biases and errors, especially as the load of data

²⁸N. A. Nwagwu, "The Importance of Effective Communication in Administration", *The Bureaucrat*, Benin-City, 3, 4, July-September, 1975.

increases. Load may also involve either lag (delay) in processing or reduction of lead (loss of complaint essence) in forecasting from received data.

Information systems are subject to certain patterned distortions, one of which is amplification of positive feedback in a spiral of implementation eliciting positive and negative feedback. Of course, negative—only selectivity is also possible. There may also be channel-drift, a situation in which a system attuned to one channel of information input gradually shifts in frequency toward another channel with intended system consequences. One other form of distortion worth mentioning is short circuiting. This happens where data are not subject to all phases of the input-transform-output system. Thus a complaint can be treated without reference to records and organisational practices.

Unfortunately, little concrete studies of urban complaints handling instruments in Nigeria have been done. There are a number of reasons for this. There is the almost total neglect of urban administrative studies, perhaps until recently.²⁹ There is also the scholarly neglect of complaints handling instruments in Nigeria generally. So far, the most attention in this area has been on the ombudsman institution, and of course, practically none of this on the institution from the perspective of its role in urban administration.³⁰ The specific neglect of the urban complaints handling system seems to have some practical roots.³¹ Simply said, urban administrators (scholars and practitioners) in Nigeria pay lip-service to the subject with the result that the design and operation of urban centre's administrative machinery almost never give recognition to complaints handling.³² In a sense, this situation may have been encouraged by the fact that the civil service is ubiquitous in this country, in addition to the persistence of military rule and suspension of democratic activities. Yet, in another, the opposite effect may be the legitimate thing to expect since complaints systems provide some opportunity for citizen participation in urban governance. The history

²⁹See, D. Olowu, "Local Government and Urban Administration..." *op. cit.*, Introduction.

³⁰For a review of the existing works on the Nigerian Ombudsman see, V. Ayeni, "Nigeria's Ombudsman System: A Review of Literature", *ODU*, Ife, January 29, 1986.

³¹The only known notable exception is a scant discussion of complaints as measure of political participation in C. A. B. Olowu, "Local Government and Urban Administration..." *op. cit.*, pp. 176-180.

³²See footnotes 21 and 31 above: *The Guardian*, Lagos, September 5, 1986, back page. Compare the attitude to complaints handling in Nigeria with the situation in Hongkong, for example, R. W. Kitlin, "A Survey of the Complaint-Handling Institutions in Hongkong", *Occasional Paper Number 23*, International Ombudsman Institute, Alberta, June 1983.

of the ombudsman's adoption in Nigeria supports this possibility.³³ Invariably, it is hard to avoid the conclusion that little organised political support exists in favour of effective complaints handling in urban places. Yet this is crucial.³⁴ But why is this so?

The most obvious explanation is that some of the groups with the most potential for organised action are presently poorly mobilised. Municipal government employees are the most notable of these. Today, they remain poorly unionised and lack any effective and systematised channel of interaction with their employers. Other more organised groups in the urban situation (such as big private business employee) usually have their own specialised complaints media and appear, naturally, to care less about adequate channels for the larger public.

There is a temptation to view this seeming indifference to established public complaints channels as indicative of the socio-psychological attitude of Nigerians to complaints generally. This will be quite incorrect. As we shall see presently, the average urban resident in Nigeria is a notorious complainant. But it would appear that he has various informal channels, in addition to the few available formal ones, open to him for complaining.³⁵ Perhaps, as a reflection of his hybrid personality, a blend of traditional and modern way of life, he feels more inclined to using the less formalised channels. In fact, there is substantial evidence to confirm the fact that traditional rulers act in many ways as some kind of "unofficial ombudsmen" for urban residents.³⁶ Maybe, too, this situation reflects an indictment of the formal complaints channels. This is supported by the generally low impression of the performance of Nigeria's ombudsman institution, itself meant to improve on the works of others such as the court system and traditional democratic process.³⁷

The most reliable information on urban complaint pattern in Nigeria at the moment could be found in studies on the ombudsman institution.³⁸ Although, there is an extent to which the ombudsman's

³³For a review of this history see, V. Ayeni, "The Adoption of the Ombudsman Plan: Background and Aftermath of Decree 31 of 1975", *The Ombudsman Journal* Alberta, 4, 1984-85.

³⁴*Ibid.*

³⁵For a review of these possible channels see V. Ayeni, "A Typology of Ombudsman Institutions", *Occasional Paper Number 30*, International Ombudsman Institute, Alberta, September, 1985.

³⁶See for more elaboration, V. Ayeni, "Traditional Rulers as Ombudsman: In Search of a Role for Natural Rulers in Contemporary Nigeria", *Indian Journal of Public Administration*, Vol. XXX, No. 4, October-December, 1985.

³⁷See V. Ayeni, "The Public Complaints Commission and Nigerian Bureaucracy", Ph.D. Thesis, University of Ife, Ile-Ife, 1984.

³⁸See V. Ayeni, "Nigeria's Ombudsman System...*op. cit.*

complaints pattern is influenced by its jurisdiction, available studies, nevertheless, confirm the high complaints generative capability of urban centres. So far, the highest yearly rates of complaints in the Nigerian ombudsman institution are recorded in the high urban conurbations of Kano, Sokoto, Bendel, Oyo, Lagos, Ondo and Ogun. If one disaggregates the load in each state, the urban effect becomes even sharper. On the average, each state capital, usually the most urbanised centre in the state accounts for not less than 30 per cent of total yearly load. In some cases, such as Ondo and Bendel states, the figure is as high as about 50 per cent and 40 per cent respectively. Complaints load from other urban centres follow that of the state capital, usually in the order of degree of urbanisation. Hence, we find in Ondo state that Ado-Ekiti, Ondo, Owo and Aramoko (in that order)³⁹ are the other top-ranking centres of complaint-generation.

Two main explanations can be advanced for this pattern, namely, the concentration of bureaucratic organisations, and of the most complaints prone population in the urban centres. As we observed earlier, Nigerian cities are primarily administrative and commercial centres. And coupled with the enormous demand for social and public services, the need for bureau-organisations in Nigerian centres is necessarily strong. Contrariwise, with little or none of these forces at play, the rural areas are, in comparison, far less bureaucratised. The concentration of bureaucracies in urban places also largely explain the heavy presence of complaints prone people in the cities as compared to rural centres. To elaborate, let us also briefly examine the data on the Nigerian ombudsman experience.

Complainants to the ombudsman have been found to fall into two broad categories: clients and employees of bureaucratic organisations. This is natural. These are the people who come in most contact with bureaucracy and thus most exposed to its side effects. The subject matter, of most complaints raised confirm this assertion.

Generally, the ombudsman's complainants are literate, employed people. But they need not possess very advanced educational qualifications. They must, nevertheless, be sufficiently enlightened and exposed to appreciate their grief, and very importantly, the existence of the ombudsman as possible medium to a redress. In the same vein, the ombudsman's complainants are not necessarily highly placed people. Indeed they fall mostly into the lower employment cadre. Thus the urban working class population or junior level blue and white collar workers account for almost 50 per cent of total complainants.

³⁹Evidence of the relative urbanisation of these towns can be found in C. A. B. Olowu, "Local Government and Urban Administration...*op. cit.*, Appendix II, pp. 301-309.

The nature of issues complained against is both employment oriented as well as related to the non-work and general public life of citizens. These issues can be broadly categorised into three: personnel and industrial relations matters; breach of contract or agreement; and administrative excesses. On the whole, about 40 per cent of complaints to the ombudsman are employees' complaints against their employers, either government or private sector. The rest are mostly from client. One other noteworthy feature of urban complaints relates to the fact that they are mostly defensive as against being offensive. Defensive complaints describe those in which the complainants wish to defend themselves against some actions done or contemplated. In contrast, offensive complaints seek to extract from or criticise the action or quality of actions of an organisation.

All said, the complaint-pattern in Nigeria's urban places has a high stress-potential primarily because the grief often suffered is a directly personal one. And coupled with the evidently high rate of generation, there can be no question about the need for complaints handling institutions in Nigerian city centres. The issue, rather, is whether or no existing institutions are adequate. The insufficient information on this subject notwithstanding, it seems the reaction to this issue will unavoidably be in the negative. Among other things, the disorientation of Nigeria's urban population (at least going by daily media reports), the known performance of some of the existing formal channels and the secretive and self-defensive tendency of government bureaucracies in Nigeria,⁴⁰ suggest that the complaints handling need of urban residents is not likely being well met presently. Even the suspicion that many urban complainants resort to informal channels is disturbing. Clearly, this raises the question of accessibility. How many urban citizens are accessible and fit to use such channels? Accessibility tends in most cases to be a function of social status. The more privileged tends to be the more accessible. Given the findings from the Nigerian ombudsman institution, the most complaint-prone urbanites would appear to be at grave disadvantage in this situation.

In effect, any serious urban administrative improvement effort in Nigeria, must have to include definite programme to ameliorate the current complaints handling situation. We, therefore, turn to some suggestions for constructing and actualising such a programme.

TOWARDS AN EFFECTIVE COMPLAINTS HANDLING SYSTEM IN NIGERIA'S URBAN PLACES

Two pertinent conclusions have emerged from the foregoing discussions. First, we have asserted the inevitable need for effective, accessible and

⁴⁰See, for example, *Sunday Times*, Lagos, March 23, 1986, front page.

progressive complaints handling institutions in Nigerian cities. And second, it has been shown that a suitable complaints handling system is one which is diverse enough to meet the multifarious needs of urbanites. Since complaints instruments do not necessarily share identical advantages (and disadvantages), it follows that an appropriate urban complaints handling system must itself consist of many different instruments.

Hence, in proposing any recommendations there are two angles from which one must proceed: the macro and micro. The former relates to problems associated with the complaints system at large, and the latter to individual instruments that may be adopted. However, it would be quite cumbersome to want to deal with each possible instrument. What's more, we do not at present have sufficient information on all the instruments in Nigeria's urban places, on the basis of which we can proceed. Of course, it is doubtful whether such information will be available in the near future. Consequently, we shall simply proffer below a list of suggestions which can be adapted to both the macro or micro levels. The proposals take clue, essentially, from the communication model set out earlier.

An effective complaints handling system (or instrument) must as much as possible possess the following features:

- (a) Must have a legal backing.
- (b) Accessible and easy to use. It must not create unnecessary financial cost on clients. In fact any cost should be avoided if possible. It should also not be procedurally cumbersome.
- (c) It needs to have a clear jurisdiction. It might be necessary to have both geographically and functionally specialised as well as non-specialised complaints offices in urban places.
- (d) In spite of (c) above, an arrangement for easy interaction amongst all offices must be clearly worked out. In particular, this should make referrals possible.
- (e) Each complaints office must also on its own have easy access to bureaucratic agencies within its jurisdiction. It is only in this way that the office can effectively link complainants and agencies.
- (f) A complaints office must be accorded respect and prestige. One significant way of doing this is to carefully select the top ranking personnel who will man it. Elsewhere, a case has been made for the involvement of some category of natural rulers in ombudsman work side by side with others specifically designated to perform the function.⁴¹ This proposal is useful not only to enhance the overall prestige of a complaints institution, but also

⁴¹V. Ayeni, "Traditional Rulers as Ombudsmen...", *op. cit.*

to take account of some other considerations raised below. Prestige must not be to the detriment of access and relevance. It is indeed, very easy for personnel to be picked in a way that alienates the commoner. This qualifier is particularly important not just for reasons of operational efficiency but also as political counterpoint to some reservations that have been expressed against complaint-handling. It is useful to quickly digress to this.

Some radical opinions believe that complaint-handling because of its emphasis on system maintenance and stability is conservative and fundamentally *status quo* oriented. It is more or less, a placebo for ensuring continued oppression of the masses. The tendency to justify direct involvement of influential, well-placed persons (members of the bourgeoisie class as the Marxist would call them) in complaint handling is seen as the most obvious vindication of this criticism. The first half of this criticism would appear, with qualification, largely correct, but not the least the other. As shown above, complaints-handling derives its orientation from bureaucratic administration, the essence of which is the effective and efficient realisation of the objectives of the existing order, irrespective of ideological inclinations. In other words, just as bureaucracy does not interest itself as such in the political issue of overthrowing the present order, but rather seeks to enhance its capability, so is a complaints instrument. It is unfair to blame complaints handling systems for the political disabilities of a prevailing political order. In the same vein, it is difficult to see how such a system can function efficiently without competent and reliable personnel, the type which, of necessity, have to be sought from amongst the elites.⁴²

- (g) Operationally, the office must be speedy and initiative and, at the same time meticulous in the use of records. It must be objective, competent and fair.
- (h) It cannot use records properly if it does not itself have a repository. So, good record-keeping is essential.
- (i) An effective complaints handling office, particularly the one that possesses the features in (f) above, is one which is independent. Independence, however, is not just guaranteed through legislative provisions. There must be obvious practical commitment to it through, for example, the provision of fund to the office. This logically leads to the next point.
- (j) The idea of complaints-handling institutions, besides its efficiency import, calls for a humane disposition. Effective complaints

⁴²Also see, C.T. Burbidge, "Problems of Transferring the Ombudsmen Plan", *International Review of Administrative Sciences*, Vol. 40, No. 2, 1974) and V. Ayeni, "The Public Complaints Commission..." *op. cit.*, pp. 402-3.

handling cannot exist where the participants do not appreciate the dignity and worth of others and seek to preserve these. In short, the need for complaints offices, must be more than symbolism and rhetorics for urban policy makers. In the same vein, operators of the complaints handling system itself must be psychologically and philosophically committed.

The concrete institutional manifestation of these features will take various forms as ultimately dictated by the disposition and preferences of policy makers. All the same, given the historical experiences of Nigeria's urban places, it seems advisable that effort be made to establish complaint instruments, in permanent forms, at the following points: community leadership level; the local government secretariat; press and electronic media; and offices of heads of government (National and state). This is in addition to continued maintenance of the existing national network of offices of the Public Complaints Commission. These are the minimum arrangements that should exist. They are also the areas that seem least vulnerable to the political uncertainty that generally prevail in Nigeria's urban places. Finally, the actualisation of these arrangements equally offers a lot of advantages for rural areas. The complaint handling points identified will almost invariably cover the rural sector too. It is true that the complaints generature potentials of rural centres is generally low. There is need, all the same, for means of processing the few complaints that often arise in them. This is more so if a situation of absence of formal complaints channels in the country side is not to further deepen the crisis of rural-urban migration.

All said, any genuine improvement in the urban complaints handling process in Nigeria must be accompanied with substantial reforms in urban administration generally. For instance, there is need to pursue the democratisation of the urban political process more vigorously and sincerely as this appears to offer a conducive atmosphere for pursuing the idea of complaints handling. Similarly, it is necessary that attention is paid to problems of inadequate financial and skilled manpower since these constitute part of the foundation on which any effective complaints office will be built invariably.

CONCLUSION

We have in this article attempted a review of the complaints handling situation in Nigeria's urban centres. Essentially we have demonstrated that although there is an imperative need for effective complaints handling, Nigerian cities do not at the moment appear sufficiently equipped to realise this. We, therefore, went ahead to proffer a number of possible solutions.

One final observation that one certainly should add here relates to the issues for urgent further investigation. Undoubtedly, this article has been more conceptual than empirical. Because the current state of the study of complaints institutions demands both of these approaches, one, to some extent, feels uncomfortable about the little empirical illustrations to corroborate the conceptual and theoretical assertions made. Of course, as was shown, the neglected state of the literature has conditioned this. For this reason, emphasis deserves to be placed in future on real empirical studies. Particularly as a way of ascertaining the validity or otherwise of the issues raised here, such empirical works may want to demonstrate, among other things, how complaints handling ensures system maintenance, and the variable operation and performance of the existing urban complaints institutions.

Lastly, there is need to underscore the lessons of this discussion for other Third World countries. It is no exaggeration that many of these countries little appreciate the necessity for complaint handling institution. Except for the growing interest in the ombudsman institution, not much else has been written on complaints and complaint-handling in developing countries. It is in the interest of these societies that the scope of complaint-handling expands wider and wider. The ideas raised in this article could help to satisfy both intellectual curiosity as well as the practical policy demands of this situation. □

Problems of Solid Wastes Management in Delhi

GIRISH K. MISRA

SSOLID WASTES arise in association with almost every activity of man depending upon the diversity of his action. Sources of the generation of solid wastes can be broadly classified as domestic, commercial, industrial and municipal. Refuse coming from street and lane cleansing, faecal matter, leaves, trees, landscaping, park and beach operation; house gully catch basins; and sewer cleansing, repairs and construction material, is all municipal. These four groups represent together the refuse for which most civic authorities accept some level of responsibility, and it is the character of this refuse which has determined the development of municipal refuse handling practice.¹ Although one of the obligatory functions of a civic body is to provide conducive environment for a healthy living to its citizens but in addition to fulfilling this task it is equally necessary to lay emphasis on the timely disposal of garbage from 'dalaos' and enclosures which are community collection centres located in various parts of a city. As a matter of fact, every system adopted for collection, carriage and disposal becomes outdated with the passage of time. In metropolitan cities, in particular, improvements in the system are most desirable in the light of the pace of urbanisation and industrial growth which together raise the quantum of garbage generated in these cities. In the metropolitan city of Delhi where the rate of urban growth is 4.2 per cent per annum, it becomes necessary to adopt more appropriate management devices to keep the city clean.

PROBLEMS OF SOLID WASTES MANAGEMENT IN DELHI

Solid wastes, in general, are consisted of dry refuse such as ashes, house dust, pieces of wood, iron, glass, paper, plastics, vegetable putrescible, rotten fruits, kitchen wastes, etc. In advanced countries solid

¹Indian Standard Institution, *Indian Standard Guidelines for Management of Solid Wastes*, New Delhi, 1981, pp. 3-4.

wastes may also contain heavy articles like disused cars, televisions, refrigerators, etc. In Delhi, solid wastes contain a large percentage of organic putrescible material as compared to western countries and as such its regular disposal is absolutely essential. The Municipal Corporation of Delhi is responsible for managing the wastes generated from the residential and commercial areas whereas the industrial wastes and other toxic wastes are expected to be handled by the units responsible for generating the same.

To examine various managerial problems concerning solid wastes in Delhi, an effort is made in the ensuing paragraphs to classify these problems into four groups, *viz.*, (i) organisation, (ii) storage and collection, (iii) transportation, and (iv) disposal.

Organisational Problems

Organisational problems are found at two levels—one at the head office and another at the field offices. In the former case, the staffing and supervision are very poor. The present organisational set-up of the Conservancy and Sanitary Engineering Department (C&SED) that looks after the management of solid wastes in Delhi, thus needs to undergo certain changes to streamline its staffing pattern as well as to improve its supervisory capabilities. In the latter case, it is seen that non-technical persons are controlling the workshop at the middle level management in zones. All operational aspects are the concern of such persons, with the result that vehicle drivers are taking undue advantage by declaring too many breakdowns and not conducting full trips. Besides, in the absence of any proper storage department, vehicles often stand idle due to the non-availability of equipments and spare parts. A probe is, therefore, needed at the field level to suggest remedial measures to overcome this problem.

The zonal level is headed by a Zonal Engineer (Drainage). Under him there are Sanitary Superintendent, Junior Engineer and Foreman. There are two Chief Sanitary Inspectors, 13 Sanitary Inspectors (Areas) and one SI (Refuse Removal) under the SS. Whereas SI (Areas) is assisted by 30 Assistant Sanitary Inspectors and 15-20 Sanitary Guides, the SI (Refuse Removal) is assisted by only one ASI and two Sanitary Guides. Under ASI (Areas) there are 2,000 *safai karmacharis*, approximately. Also 42 drivers are under the charge of ASI and SGs on refuse removal side. On the other hand, the Junior Engineer is assisted by four mechanics, five fitters and 20 *beldars* whereas the Foreman is assisted by one Assistant Foreman, 4-5 mechanics, six fitters and 30 cleaners/helpers in the City Zone (Chart I). The Foreman is technically governed by the ZE (Drainage). Thus, equipments are operated under SIRR and their

ORGANISATIONAL SET-UP OF C & SE DEPARTMENT AT THE CITY ZONE OF MUNICIPAL CORPORATION OF DELHI

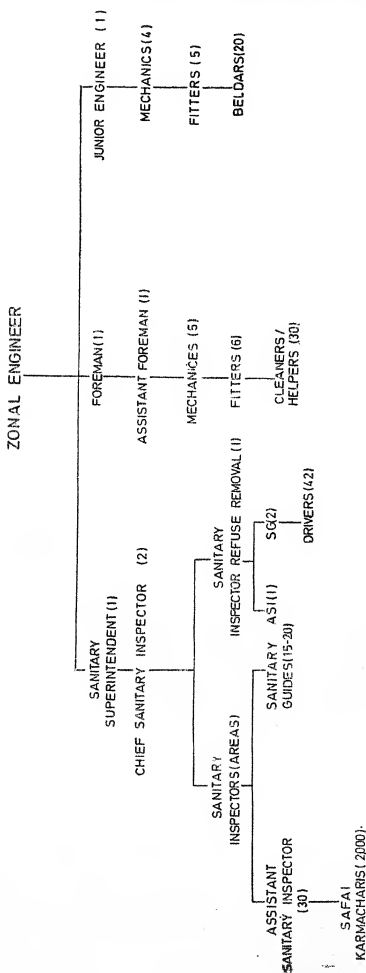


CHART I

staff at the zonal level. Being non-technical persons, they cannot exercise any control over the technical problems. For example, if drivers or operators point out any defect in vehicles, they simply pass on the information to the workshop which is, as stated above, technically controlled by the EE (Auto) at present. This kind of procedure does not lead to any effective utilization of the vehicles/equipments as they have to depend upon the operators/drivers on the one hand and the workshop on the other.

In view of the above problem, it is felt that the entire workshop at the zonal level should be placed under the control of SE (Auto) both administratively as well as technically. *Reorganisation of the C & SE Department:* The above change would automatically lead to a reorganisation of the present C&SED particularly its auto workshop. Also in view of the following reasons, this reorganisation is very much needed:

- (i) There has been no attempt made to review the functioning of the C & SE department. The population of the city is increasing fast, thus mounting great pressure on the existing manpower and equipments. To acquire and utilize trucks, a proper planning is required.
- (ii) There is no organisation worth the name for provisioning stores, parts, etc. Trucks are being held up due to the non-availability of tyres, batteries and spare parts.
- (iii) The SE (Auto) does not have any officer to assist him in establishment and administrative matters. He has to spend major part of his time in such matters with the result that the workshop is not utilizing his technical expertise fully.
- (iv) The present zonal workshop needs strengthening on account of the number and variety of vehicles handled by them.
- (v) There is no adequate provision for the repairs of wheel-barrow numbering about 10,000.
- (vi) In the present set-up in the workshop, civil engineers are generally loaned from Water Supply Department who are neither competent nor take interest in the motor traction. Consequently, things get dislocated except that some routine things like breakdown maintenance is going on.

All the above reasons warrant the need for a well-planned and organised mechanical set-up of the Auto Workshop. Hence, with a view to eliminate the above deficiencies and streamline the functioning of the workshop, it is proposed to reorganise its set-up keeping in mind the functions being performed by it and those to be added to it.

Considering the multifarious nature of the activities undertaken by the workshop it is suggested to organise the zonal and central workshops

as under:

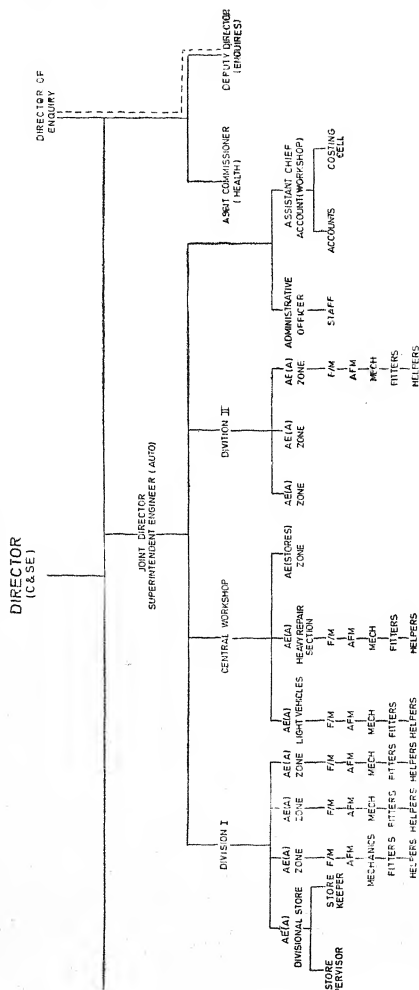
- (i) A senior level officer of the rank of Superintending Engineer will head the auto workshop. The position of the new set-up of workshop is shown in Chart 2.
- (ii) There will be three divisions, each headed by a Deputy Director of the level of EE who will control 2 to 3 zones. The Divisional Officers will possess automobile engineering qualification.
- (iii) Each division will have a divisional store which will procure spare parts for these zones. It will also possess an electrical and mechanical unit which will be responsible for the repairs and maintenance of vehicles/equipments, sewer cleaning machines, rodding machines, wheel barrows, etc.
- (iv) Each zone which is now a part of the Auto Workshop will be under the rank of an Assistant Engineer. He will be responsible for the operation and repair and maintenance of vehicles. The entire operation will be under the charge of a Foreman as against SIRR which is the case at present. Each Foreman will be assisted by an Assistant Foreman, 4-5 mechanics, 5-6 fitters and 25-30 helpers in each zone.

Each zonal workshop will repair and maintain about 50 vehicles. Transportation of the refuse from the points of collection to dumping ground will come under the control of these zonal workshops. The posts of SIRR, ASI and SG being deployed by the C & SE Department at present should be surrendered, as necessary technical staff has been proposed for the workshop. Under this new set-up, collection of garbage will be the responsibility of the ZE (Drainage) whereas transportation and disposal will be looked after by the Auto Workshop.

In the Central Workshop, there will be independent and fullfledged sections for: (i) the light vehicles, (ii) heavy vehicles repair including earthmoving equipments; (iii) stores; (iv) establishment and administration, and (v) accounts (including the costing cell). Whereas most of the establishment, administration and accounts matters will be decentralised in the three divisions, matters of common interest, policy matters and other important items will be centralised in the Central Workshop.

The financial implications of the scheme as worked out by the CSE are based on the norms adopted by the National Projects Construction Corporation and the Committee on Urban Waste set up by the Government of India. The total strength of the vehicles and equipments held at present is 548 which will increase to 696. Utilizing the above norms, the total strength of the staff will increase from the present 389 to 619. For the additional staff, the total expenditure is likely to be in the vicinity of Rs. 14 lakh per annum, the present overall expenditure being Rs. 27 lakh.

ORGANISATIONAL SET UP OF CONSERVANCY & SANITATION ENGINEERING DEPARTMENT
(PROPOSED)



NOTE FOR ABBREVIATIONS USED IN THIS CHART : SEE CHART 1

CHART 2

The reorganisation scheme would provide cohesive and complete organisation with unity in command. It will be a good blending of centralised as well as decentralised functioning based on the requirements of various zones. As the responsibility of transportation of the refuse will also devolve on the Auto Workshop, the position of availability and utility of trucks will be enhanced. The life of vehicles will also increase due to preventive maintenance being given more importance. Also it will provide a liaison between drivers and the workshop. Other mechanical equipments like wheelbarrows, sewer cleaning machines, rodding machines, etc., will be undertaken by the Auto Workshop for repair which is not the practice at present.

Storage and Collection Problems

The Municipal Corporation of Delhi has 10 zones for the storage, removal and disposal of solid wastes. Table I shows the quantity of refuse generated at these different zones. It is at Sadar Paharganj Zone that the maximum amount of refuse is generated followed by the City Zone and Civil Lines Zone.

TABLE I QUANTITY OF SOLID WASTES GENERATED IN DELHI, 1980

<i>Sl. No.</i>	<i>Name of zone</i>	<i>Quantity of garbage generated per day (in tonnes)</i>	<i>No. of trucks</i>	<i>No. of trips in a fortnight</i>	<i>No. of trips per day</i>
(1)	(2)	(3)	(4)	(5)	(6)
1.	City Zone	258	3	650	43
2.	Civil Lines Zone	246	30	620	41
3.	Karol Bagh Zone	186	23	470	31
4.	New Delhi Zone	174	13	440	29
5.	South Zone	102	15	260	17
6.	Sadar Paharganj Zone	282	38	710	47
7.	Shahdara Zone	162	27	410	27
8.	West Zone	198	24	500	33
9.	Najafgarh Zone	30	4	70	5
10.	Narela Zone	42	4	100	7
TOTAL		1,680	213	4,230	280

SOURCE: C & SED, New Delhi.

The total quantity of solid wastes generated per day in Delhi ranges between 1,700 to 2,000 metric tonnes including the areas under the jurisdiction of New Delhi Municipal Committee and Delhi Cantonment

Board. The density is about 520 kg/cubic meter, though it varies considerably from one locality to another conditioned by the levels of the standard of living. It is high in localities where the standard of living is low and *vice versa*. Again it is high in the rainy season as compared to the dry season.

The refuse collected in Delhi is of varied size and type. In India, about 75 per cent of the solid wastes consist of vegetable putrescible matter and another 15 per cent comprise fine dust and ash.

Table 2 shows the physical analysis of refuse in Delhi. It is seen that about 58 per cent refuse is constituted by compostable matter, 33.95 per cent by clay fine earth, 27.51 per cent by fine organic matter, 5.88 per cent by paper and so on.

TABLE 2 PHYSICAL ANALYSIS OF REFUSE IN DELHI

<i>Constituent</i>	<i>Percentage to total weight</i>
Vegetable matter	20.34
Paper	5.33
Rubber and Leather	0.95
Plastics	0.51
Rags	3.56
Wooden matter	0.42
Metals	0.59
Glass	0.31
Coal	1.80
Crockery and Bone	0.32
Earthenware, Stones and Bricks	3.86
Fine Organic matter	27.51
Total Compostable matter	57.71
Fine Earth	33.95

NOTE: All values are given in percentage and are calculated on net weight basis.

Table 3 shows the distribution of these physical constituents according to different income categories and landuse. The higher income group residential areas show a high paper, metal and plastic contents. Table 4 shows the chemical analysis of refuse. It contains reasonably high percentage of moisture. Measurement of the total weight of wastes delivered to a disposal site, however, is seldom an accurate indication of wastes generated as distinct from collected because of losses at various stages. Thus salvage is caused by servants, scavengers, collectors and disposal staff. Whereas in western countries this salvage is controlled; in developing countries it is mostly uncontrolled. The city of Delhi is, however, not an exception to the latter.

TABLE 3 PHYSICAL ANALYSIS OF REFUSE IN DELHI ACCORDING TO TYPE OF LOCALITIES

Sl. No.	Type of locality	Vegetable matter	Paper Rubber & Leather	Plastics	Bags	Wooden matter	Metals	Glass	Coal	Crockery & Bones	Earth-ware	Stones & Bricks	Fine organic matter	Total combustible matter	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1.	Residential														
	(a) High Income	22.34	5.17	0.18	0.35	3.53	0.27	0.50	0.40	1.93	0.31	4.74	21.57	52.88	38.71
	(b) Middle Income	16.39	4.79	1.57	0.60	3.47	0.39	0.57	0.40	0.46	0.46	3.22	31.94	56.98	34.71
	(c) Low Income	15.62	4.35	0.55	0.62	4.00	0.40	0.62	0.12	2.74	0.39	3.79	29.76	54.13	37.14
	(d) Slum Areas	17.67	0.73	0.55	0.26	4.00	—	—	—	0.18	0.18	12.91	18.30	40.70	45.22
2.	Commercial	34.08	5.93	—	0.08	1.25	0.67	0.40	0.11	0.97	—	3.35	25.15	66.58	27.73
3.	Industrial	20.80	6.27	1.29	0.31	8.82	0.57	0.20	0.99	2.92	0.03	4.98	18.20	54.66	34.70
4.	City as a whole	20.34	5.88	0.95	0.51	3.56	0.42	0.59	0.31	1.80	0.32	3.86	27.51	57.71	33.95

Source: C & SED, New Delhi.

TABLE 4 CHEMICAL ANALYSIS OF REFUSE IN DELHI

<i>Constituent</i>	<i>Percentage to total weight</i>
Moisture	14.21
PH value	8.61
Organic matter	36.77
Carbon (C)	20.80
Nitrogen (N)	0.77
Phosphorous	9.72
Potassium	0.49
C/N Ratio	26.52
HCV BTV/16	28.95

NOTE: All values are calculated on dry weight basis except moisture, and all values are given in percentage except PH/C/N Ratio and HCV.

SOURCE: C&SED, New Delhi.

Refuge Storage

No *safai karmachari* is employed for the collection of domestic wastes from households. It is collected by customary sweepers/private collectors engaged by them. In Delhi there exists a community of these collectors known as 'balmiki'. They consider it to be their privilege or customary right to sweep the private houses at a small fee. Earlier these *balmikis* used to carry the domestic wastes in baskets over their head to a collection point. To stop this age old inhuman practice, the C&SE department has now provided them wheelbarrows free of charge. The expenditure is met out of the funds donated by the Harijan Welfare Board of Delhi Administration. It is seen that still there are places in the City Zone where garbage is brought to the collection site in baskets. More number of wheelbarrows therefore should be given to these private sweepers.

One genuine complaint of the customary sweepers is that their payment is determined by households which not only varies from one locality to another but is also very low. The sweepers desire that the Government should enforce some legislation to fix a uniform wage rate for sweeping and collection of domestic wastes.

The method of storing refuse in Delhi is communal container to which domestic and shop wastes are delivered by residents. These are extremely large concrete structures. These are attractive in design and possess curved screen walls to hide the contents. Spacing of communal containers is determined mainly by their capacity which is the widest in Delhi. The distance between containers, in fact, explains the reason for employing private collectors by households in Delhi. Almost without exception, communal containers cause problems. They are sometimes overfilled or disturbed by birds, dogs, pigs and cattle as well as

scavengers searching for salable materials.

Depots which are one of the several communal storage methods, are known as 'dalaos' in local parlance. They consist of a single-storey building about the size of a large garbage or the ground floor of a multi-purpose building. Most of the *dalaos* in the City Zone, for example, are fitted with tiles. Delhi has 175 *dalaos* which are generally 30 feet long, 15 feet wide and 15 feet high. The capacity of such a *dalao* is as great as 25 cum/day which is probably needed for a population of 10,000 or more, at the present local rate of generation. *Dalaos* are very widely spaced and are best suited for densely populated areas of the city. But the most difficult problem squarely faced is that of acquiring sites for storage depots in Delhi. Such *dalaos* are however helpful in protecting the wastes from gaining access to them because the size of the installation is sufficient to justify placing a labour to exercise continuous control over it.

Flintoff² has suggested to adapt the depots to house trailers or exchangeable containers into which wastes could be emptied. A Split Level Dalao is suggested to overcome this problem. There are following advantages of this method:

- (i) One can keep the refuse stored directly on the top level.
- (ii) The feeding area in this system is higher than the collection centre by about 1.2 metres to 1.5 metres so that split level can be achieved without any drainage problem at truck parking space.
- (iii) Loading of vehicles can be done with just a little effort of pushing the refuse by a man on the top.
- (iv) Number of persons required to do the job is reduced from 6 to 3, the latter being the case where the communal method is adopted in Delhi.
- (v) Time taken in loading refuse on to a vehicle at present is about 1½ hours which is reduced to 15 to 20 minutes in the case of the Split Level Dalao. However, these *dalaos* are suitable only at places where the topography permits for the construction of a raised structure of this sort.

In Delhi masonry dust bins are also very common. These are fixed at one place and the garbage is emptied from them with the help of a rake through an opening at ground level. If the material is free-flowing like coal this would work well, but wastes tangle together and in practice it is often impossible to remove them through a relatively small aperture in the way. As a result, the collectors have to climb inside and fill their baskets from the top of the heap, thus exposing large parts of their body

²F. Flintoff, *Management of Solid Wastes in Developing Countries*, World Health Organisation, New Delhi, 1976, p. 30.

to contact with the wastes. To overcome this problem, it is suggested to go for large size dust bins of 20 to 50 litres capacity, which could be easily unloaded into hand trolleys (Fig. 1). The manufacturing cost of such dust bins if manufactured in Municipal Workshop will be in the range of Rs. 25-30. The fixing cost at the site may be about Rs. 20. If the quantity of garbage generated at some sites is more than 59 litres, provision for two bins can be made in the same design.

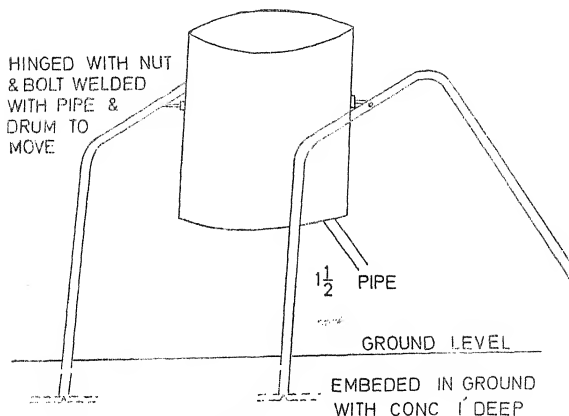


FIG. 1

Transportation Problems

The Conservancy and Sanitary Engineering Department has a fleet of 213 trucks for the collection and disposal of solid wastes (Table 1). About 50 per cent of the total vehicles are new models equipped with tipping gears; the remaining vehicles are old models mostly without that arrangement. Whereas the capacity of the former is 8 tonnes, it is 6 tonnes in the case of the latter.

One basic problem with the new models is the height of their body which proves to be too high for lorry *beldars* while emptying a basket into them. To overcome this problem, the following suggestions can be given:

- (i) The vehicle is to be designed such that the height of its body is reduced by one foot.
- (ii) Special arrangement is to be made around denots by making a

feet high platform such that a *beldar* can easily load wastes on to the vehicles.

It is necessary to fix a limit to the life of refuse removal trucks. Thus all the old trucks and vehicles which are incapable of performing full workload and on which the maintenance cost is more than required, may be put to auction. This may be done while they are in running condition so that the maximum price may be obtained for the MCD. Also it is suggested to prepare an annual plan for the replacement of old trucks by the new ones.

Apart from these trucks, also there is a need for using small vehicles like tractors, tempos and autorickshaws or refuse collecting vans for transferring the wastes from *dalaos* enclosures to a terminal in every zone. At present there are no terminals but if they are established than refuse collecting vans of the type shown in Fig. 2 can be used for the purpose. This design has been adopted by Environmental Research, Planning and Design Organisation (ERPDO) of the Punjab State. Such a three-wheeler can be easily provided with tipping arrangement. Following are the distinct advantages:

- (i) Its carrying capacity is $\frac{1}{2}$ ton.
- (ii) It needs a very low capital investment.
- (iii) It requires a low operation cost.
- (iv) Only two sweepers can constitute a loading team.
- (v) Being a small vehicle it can easily approach most of the congested localities through narrow lanes and streets.

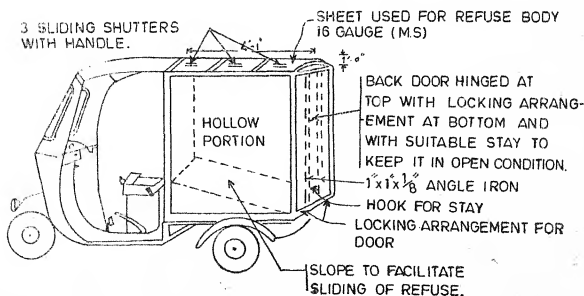


FIG. 2

Problems of Solid Wastes Disposal

Disposal of solid wastes is done by three methods: (i) Sanitary Land

Fill, (ii) Composting, and (iii) Incineration. However, only the first two methods are in operation in Delhi.

Disposal by Sanitary Land Fill

There are four sanitary land fill sites in Delhi. These sites are so located that average distance from any collection point is not more than 15 kms. Following operations are adopted for the disposal of garbage:

- (i) Garbage is dumped by refuse removal trucks on the ground which is then pushed by bulldozers in unfilled areas.
- (ii) *Malba* generated in Delhi is also brought to these sites by Municipal Corporation and private trucks which is spread over the freshly laid garbage.
- (iii) The site when filled up to the desired level, fine earth is spread over it and horticulture works are undertaken.
- (iv) Disposal sites so filled are then developed into parks and woodlands.³

Following problems are faced in the proper management of sanitary landfill sites in Delhi:

- (i) Lack of adequate finances.
- (ii) Inadequate water availability for horticulture work. In Timarpur, for example, it is not possible to develop horticulture as it is difficult to bore tubewells due to rocky nature of the land. The water made available at present by the MCD is purely meant for drinking purpose.
- (iii) Non-availability of urban land for future locations of SLFs.
- (iv) Due to financial constraints and maintenance cost, the departmental bulldozers prove to be very costly.
- (v) Land under SLF vests with the Delhi Development Authority and after filling of land is done, it has to be given back to the DDA. Above and all, the DDA desires to have the lease money against using the site for the purpose of land filling.

To overcome the above problems, it is suggested that more funds should be allocated by the MCD for managing sanitary land fill sites. The latter may be taken up at an appropriate level for getting suitable subsidy even from DDA since the lands filled by the garbage appreciate in value.

³B.B. Nanda, *Solid Wastes Management in Delhi*, Conservancy and Sanitary Engineering Department of Municipal Corporation of Delhi (unpublished).

Composting

The Municipal Corporation of Delhi has set up a plant of 150 tonnes per day capacity at Okhla for composting city wastes at a cost of Rs. 80 lakh including government subsidy of the order of 33 per cent. The method adopted for composting is that of aerobic. In this method, the garbage is directly unloaded on windrow pad and formed into a windrow. The garbage piles are then turned and aerated at a regular interval of five days. At the end of the 20th day, the material is taken for screening, where non-compostable materials are removed first by hand picking, then through screening and finally, through a ballistic separation. The estimated cost of production of compost works out to Rs. 80 per tonne. However, this method involves high capital cost and as such very few civic bodies can afford to go in for it.

The only problem facing the compost plant is higher sale price of the compost. Whereas the production cost is Rs. 80 per tonne, the sale price is Rs. 40 per tonne. This gap can be reduced by converting all loans given by the Government into subsidy. Land should also be given on subsidised rates.

CONCLUSIONS

An attempt has been made in this paper to overcome various organisational and managerial problems faced by the Conservancy and Sanitary Engineering Department. A summary of the suggestions is given below:

1. In the city zone of MCD, the Zonal Officer of C & SE Department is without any qualified middle level management people. Consequently, there is no effective utilisation of the vehicles/equipments. It is proposed to place the entire workshop at the zonal-level under the control of SE (Auto) both administratively as well as technically.
2. There is no proper arrangement in the auto workshop for the repair of wheelbarrows, sewer cleaning machines, rodding machines, etc. This may be undertaken by the auto workshop.
3. Although wheelbarrows are provided by the C & SE Department to customary sweepers free of charge but still there are examples in the City Zone where this is not done. This makes one to believe that in other zones also such type of phenomenon may exist. To remove such deficiencies, efforts should be made by the C & SE Department to distribute more number of wheelbarrows to customary sweepers.
4. The existing conventional *dalaos* are not suitable from the health point of view of the collectors of garbage due to double handling

by carrying the garbage over the head. All wastes are dumped on the ground which are then transferred to a receptacle by filling baskets. In this process the collectors are often brought into close contact with the wastes. Therefore, efforts should be made to construct Split Level *Dalaos* in places, where topography permits for their construction.

5. In Delhi, masonry dust bins are also meant for storing the garbage. Unfortunately, these are generally fixed at one place and the garbage is removed from them with the help of a rake through an opening at ground level. At times when this opening is blocked the collectors have to climb inside the dust bin to fill their baskets. To overcome this problem a large size dust bin of 20 to 50 litres capacity is suggested which could easily be unloaded into hand trolleys or wheelbarrows.
6. The City Zone is a congested area with narrow lanes and roads. Trucks take more than required time to collect garbage in this area. To avoid this delay, it is suggested to use small vehicles like tractors, tempos and auto-rickshaws or refuse collection vans for transferring the wastes from collection points to a terminal. In the first place the garbage will be transferred from households to *dalaos*. Next it will be transferred from *dalaos* to terminals. Lastly, it will be carried from these terminals to the nearest dumping ground by a truck. The article, therefore, proposes such a terminal as a secondary collection point which does not exist in Delhi at present.
7. Disposal of garbage by Sanitary Land Fill has many problems like lack of funds, inadequate water supply for horticulture work, non-availability of urban land for their future locations, higher maintenance cost of bulldozers and land being vested with the DDA. To overcome these problems, it is suggested to allocate more funds for maintaining SLFs by the MCE and land so developed should be given to MCD as a rightful owner so that it can be used for some gainful purposes.
8. Higher sale price of the compost should be reduced by converting all loans given by the government into subsidy and should also be given on subsidized rates. □

Metropolitan Housing Analysis: A Case of Ahmedabad

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IN MOST political rhetorics, housing is regarded as one of the basic needs. Despite this recognition, however, in terms of public policies and investments, housing has generally received very low priority. Over the years, the share of resources for housing has dwindled to alarmingly low levels. Very often, even these resources have failed to make any significant impact on the housing situation of the lower segments of the population.

As a response to such a situation, housing policies have gradually changed over the past decades. First of all, there is an increasing acceptance, at least at the policy level, of support policies which rely on indirect measures to influence the patterns of supply. In accordance with this, there have been attempts to evolve strategies related to land and finance and a change in the usual approach of packaged product to a progressive development model. Unfortunately, however, there have been clear gaps amongst policy statements, action plans and actual implementation.

There has also been an increasing awareness that a basic needs perspective which is not in consonance with the resource availability and affordability, leads to piecemeal solutions which often increase disparities. The focus on the 'basic needs' approach has led to an undue emphasis on bringing down housing costs through technological interventions. The other side of housing, beyond just the physical conditions of bricks and mortar, of finance and affordability, of tenure and of social systems related to production of housing are yet to be understood better in order to transform the support policies to supportive action plans.

A second aspect of change in the approach to planning is the need to evolve regional housing policies and especially the strategies at the local level. This is partly based on observations that the support policies and

progressive development approach are not likely to work unless they are firmly linked to local level housing strategies. This necessitates changes both in the institutional structures related to housing at local levels and in the approach of related agencies. It is necessary that a good understanding of the local housing market and appropriate monitoring systems are developed.

It was in light of these emerging trends that the School of Planning, Ahmedabad has recently completed a major study of the Ahmedabad Housing Market. The study was sponsored by the Planning Commission, Government of India, and was carried out to gain insights into the aspects related to housing supply and demand processes in Ahmedabad urban area.

HOUSING SUPPLIES IN AHMEDABAD

Ahmedabad, like most metropolis in developing countries, has a distinctly segregated residential structure. Most of these developments have occurred in this century following the high population growth as a result of the development of the Textile Industry at the turn of the century. Since independence, while the city has experienced only a moderate rate of growth of population, the different sub-zones of the city show variations in the growth and nature of development (Table 1). The Old City which houses lower and middle income households is losing residential population. On the other hand, the eastern areas which accommodate a majority of the city's poorer households have witnessed proliferation of slum and other low income housing in the last two decades. The western side of the city largely serves the rich. The new entrants of this side of the city generally belong to the upper income groups. These trends are further strengthened by the operations of the housing market and reinforced by public measures like municipal investments and zoning regulations.

Along with the spatial disparities, there are distinct variations in other dimensions of housing relating to tenure, size, materials and utilities. On the face of it, the average situation in all these dimensions appears to be quite rosy. In 1981, according to municipal tax records of AMC, (which may not include a large proportion of the 'slum' areas) about 36 per cent of the houses were self owned which compares very favourably with the other metropolitan centres in India. Our survey results for the urban agglomeration including the informal sector suggest that almost 60 per cent of the households were owner occupiers of shelter. However, there are distributional problems. The lower income groups are less likely to be owners and those who do achieve ownership generally do so only in the informal sector. Similarly in terms of shelter space, although the average dwelling size in Ahmedabad stands at a very

reasonable 50 sq. mt., the median per capita dwelling space is only 5.5 sq. mt.

TABLE 1 SPATIAL PATTERNS OF POPULATION AND HOUSING CHANGES (1961-1981)

Spatial Units	Population 1981	Average decadal growth in percentages					
		Population		Households		Housing Unit	
		1961	1971	1961	1971	1961	1971
		-71	-81	-71	-81	-71	-81
Ahmedabad Urban Agglomeration	2,548,057	43.5	40.8	35.1	39.7	40.8	40.7
Ahmedabad Municipal Corporation	2,059,725	39.2	28.2	29.5	25.2	34.1	26.1
Fortwalls	474,225	4.6	-1.4	-1.4	-3.3	2.7	-72.5
AMC Eastern	1,153,043	54.1	34.6	37.9	26.8	42.6	27.7
AMC Western	432,457	94.6	60.8	86.5	67.1	90.4	66.5
Agglomerated Periphery (Total)	458,232	90.6	125.8	96.5	144.8	129.4	147.1
AP Eastern	349,367	86.4	108.6	91.5	114.8	121.9	114.9
AP Western	138,965	112.9	291.3	121.9	278.6	121.9	299.7

The material conditions of shelter are also quite good. Only 8 per cent of the stock has totally undurable (Kutchha) wall and roof while about 20 per cent have brick walls with kutchha roofing materials. The structural conditions in the sub-markets, especially catering to the lower income groups are generally quite poor. In terms of infrastructural conditions, access to water supply seems less serious. Almost 75 per cent of the households have individual water taps and another 20 per cent have at least an access to the public taps. Access to public taps, however, due to limited hours of supply and inadequate coverage, constitutes an inconvenient and constrained situation. Nearly, half of city's population does not have a private toilet, and more seriously, 15 per cent does not even have access to a public toilet.

The reasons for these spatial and economic disparities in access to housing services relates to the nature of housing supplies in Ahmedabad. The access to formal recognised sector, with a better level of housing services has been largely limited to the upper-middle and upper income groups. Besides the economic capacity necessary to enter this sector, even the information about these opportunities is not easily available. Even the public sector opportunities accrue only to the few lucky ones, as its contribution has been very limited. The limited public sector efforts are further aggravated by leakages, projects targetted at upper

income groups, inappropriate locations, poor project management and cost recovery, subsidy levels which appear unsustainable, etc. The expenditure allocations for the poor is decreasing and even this is not actually spent. Most of the lower income groups are thus dependent on the informal sector with its lower level of housing services. In recent years even the popular control and flexibility, once the major advantages of this sector are fast becoming myths.

The nature of housing developments even in a local housing market are greatly influenced by the changing structure of the urban economy, macro-economic forces and the nature of public policy. Ahmedabad, aptly titled at one stage as Manchester of India, has been largely a Textile city with almost one-fourth of the city's income being generated directly by this sector and even other manufacturing and service sectors being inter-dependent on textiles. It was the growth and boom in textiles in the pre-independence period which led to the phenomenal growth of population in the thirties. Since then, however, Ahmedabad has maintained an almost steady but moderate rate of growth. There is in fact an indication of a slight downward trend in the last decade.

City's textile industry was probably at its peak somewhere in the first half of seventies. However, since then there has been a stagnation in this sector leading to closure of 22 mills by the eighties. During this period, there has been more growth of employment in informal sector. The influence of these trends on city's overall economy and the housing activity have been substantial.

On the housing scene the fifties and sixties witnessed high growth in housing by upper income groups supported by the institutional housing finance from the Cooperative Society. Most of such housing came up in the relatively 'better' areas and housed the richer population. At this stage, with the Textile sector still doing well, the surplus generation in this sector became available for the attractive real estate sector. On the other hand, technological developments, increasing prices and greater complexities in the construction or residential development necessitated the entry of the professionals. The nature of residential processes which were largely user controlled became increasingly commercial. This was further facilitated by other legislation like Vacant Land Act of 1972 and, of course, the ULCRA in 1976. With these, the speculative investments which were so far confined largely to land were diverted to the booming real estate with high and relatively safe returns. This essentially led to a greater commercialization and commodification of housing. The market values now dominated over the use values for the housing product.

This process led, on the other hand to the entry of private firms into the areas of housing market in a dominant way. At the same time, in the informal sector, the 'slum-lordism' and quasi-legal developments

became more common place. This process of commoditization is probably not restricted to the flow of new housing but also affects the existing stock, especially in areas where effective and representative community control is lacking. The highly celebrated popular sector of the sixties is fast becoming a myth in both the formal and informal sectors.

The slump in the textile sector, however, is now affecting the nature of housing investments also. The closure of many textile mills in the city has adversely affected the cycle of accumulation of surplus. On the whole, then, there is a general sense of despair about city's economic well-being. This is further aggravated by the continuing disturbances and riots in the city. At the same time, in the economy at large, other investment possibilities are becoming available. This has probably affected the speculative housing demand in the city. This is clearly reflected in the fact that many housing projects have remained unsold or even shelved and that the house prices have been stable for the past 3 to 4 years. The market is thus again shifting back to needy buyers and is thus based on consumptive, rather than speculative demand.

Housing Demand and Preferences

In many of the local level housing strategies, (and at times even in national estimates), there is a tendency to take a need based approach without paying adequate attention to effective demand for housing services. Similarly, in most housing projects, there is a rather standardized assumption regarding housing demand. The question of housing preferences and the trade offs amongst different services is generally ignored.

In our descriptive analysis of housing expenditure, it was found the mean monthly housing expenditure in Ahmedabad was Rs. 114 with 50 per cent households spending less than Rs. 53 per month on housing. The proportion of total income spent on housing declined with increasing income, with the poorest group (income less than Rs. 750) spending nearly 18 per cent of their monthly income on housing and the richer group (income more than Rs. 2,000) spending only 7 per cent on housing. The difference between average monthly expenditure on housing by owners and renters was marginal (Table 2). However, when we imputed the capital expenditure, i.e., downpayment for owners and 'key money' for renters, we found that the average monthly housing expenditure increased from Rs. 114 to Rs. 317.

The median rent to income ratio decreases monotonically with income for renters. It, however, increases initially for owners with increases in income and then declines subsequently. Thus the marginal propensity to spend on ownership for the middle income household appears to be quite high. The same results are better understood with analysis of housing demand. The income elasticity of demand for owners is 0.2 and

for renters in the region of 0.17 to 0.40 depending upon the functional form of the demand equation.

TABLE 2 MEDIAN HOUSING EXPENDITURE TO HOUSEHOLD INCOME RATIO BY INCOME GROUPS

Monthly income groups	Percentage to total households		Median expenditure to income ratios	
	Owner	Renter	Owner	Renter
0 to 750	25.99	36.18	0.157	0.131
750 to 1000	13.37	23.48	0.070	0.090
1000 to 1500	17.33	19.34	0.218	0.050
1500 to 2000	13.37	9.67	0.086	0.047
2000 to 2500	7.53	6.09	0.167	0.020
2500 to 3000	5.65	1.66	0.171	0.032
3000 to 3500	4.33	0.82	0.070	—
3500 to 4000	2.64	2.21	0.087	0.050
4000 or more	9.79	0.55	0.049	—
TOTAL	100.00 (531)	100.00 (362)	—	—
Median	—	—	0.120	0.076
Mean	—	—	0.220	0.150

These results suggest a generally inelastic housing demand (Table 3). However, when we examine the income elasticity of demand for various income groups, we find that for lower and middle income renters, the income elasticity of demand is close to zero, and rises to 0.36 for higher income renters. On the other hand, for the owner households, the income elasticity is quite high (0.70) amongst the middle income groups.

TABLE 3 ELASTICITIES AT MEAN

	Renters	Owners	Pooled
Income	0.428	0.189	0.210
Price	-0.787	-0.382	-0.392

These estimates suggest that with adequate supply of housing finance, one would expect a much larger spending on the part of middle income groups. The 'success' of financial institutions like cooperative housing finance and the Housing Finance Development Corporation which pro-

vide financial assistance to middle income households highlights this fact.

The near inelastic demand for both renters and owners amongst the lower income groups suggest that in absence of subsidies from public agencies, they are unlikely to increase their housing consumption. However, the rent/income ratio across housetypes for the lower income groups was found to increase with better housetypes. This indicates a potential willingness to pay more for better housing, even amongst the poorer households. This implies that need for public subsidies in housing projects aimed at lower income households, would be lesser with 'better housing quality.

The price elasticity for renters was found to be -0.8 , and for owners -0.4 . This suggests that rental housing with public subsidy will induce higher consumption than owner housing. While the majority of our housing programmes are for ownership based housing, this finding suggests that rental housing programmes by public agencies would in fact help augment a larger housing consumption. This is, however, linked to the present Rent Control legislation, and unless necessary amendments are made, the rental housing programmes may not be feasible.

The home owners in Ahmedabad were found to be paying an ownership premium of 23 times the current housing expenditure. At the average, it is possible for these owner households to simply sell the house and double their monthly income. Such high ownership premia are indicative of the fact that with appropriate housing finance availability, the average propensity to spend on housing would voluntarily increase. In the informal sector, where ownership premium was found to be nearly 10 times the current housing expenditure, it suggests that with tenural reforms and slum improvement programmes, the residents of the informal sector would willingly spend more on housing.

This however, necessitates that the other housing preferences of different groups are also well understood. The highest priority of most households seems to be for ownership and appropriate house-size. However, the priority for ownership becomes more pronounced at later stages in the life cycle. This suggests a continuing need for rental housing for those in early stages in the life cycle which is generally ignored by most programmes.

The lower income groups seem to trade off shelter quality and tenure legality against work accessibility and social access. The need to locate near places of work goes beyond the obvious need to minimise travel costs. The nature of economic opportunities and consequently, the average earnings probably depend on appropriate location.

As against such preference patterns, the most important constraints relate to availability of and access to housing finance and information. Further, the residential processes are also greatly effected by the overall situation, both of housing and the urban economy in general. It is clear

that the effects of restrictive situations are either to make the households constrained or to force them to adjust their aspirations.

On the whole it appears that the lower income groups tend to adjust their aspiration considerably so that their housing preferences appear to be distinct from the others. On the other hand, the middle income groups have not adjusted their aspirations to a great extent. They are, therefore, much more likely to be either potentially mobile or feel constrained. Only the lucky ones who manage to gain access to either public housing or housing finance are able to achieve their aspirations, though generally at later stages in the life cycle. Their expectations, however, continue to be above what they can actually achieve in the market. It is only those with relatively high incomes who are able to achieve satisfactory housing easily and early in the life cycle.

Housing Upgradation

One of the generally recognised household strategies to improve housing situation is by residential mobility. However, in Ahmedabad this is not feasible alternative for most households. On the whole, compared to annual rates of 10 to 12 per cent in the western countries, only about 1.7 per cent (per annum) of the households in Ahmedabad moved during the last five years. This is despite the fact that less than half of the households are satisfied with their housing situation. Almost 24 per cent are sufficiently dissatisfied to consider moving. The rest, though dissatisfied are generally constrained in finding a suitable alternative with their affordability limits. The low levels of mobility are clearly linked to the market situations as from a housing career perspective, most of the moves in the past have occurred during the seventies when there was a considerable increase in supply.

The strategy of housing upgradation at the same location is more prevalent. More than one-third of the households have improved their housing situation by adding new rooms, changing the materials of walls and/or roofs, changing the finishing and obtaining or improving the services. Increase in dwelling size is more feasible and common in the formal sector and restricted in the informal, probably due to a lack of effective space. The nature of upgradation in the latter is more in terms of replacing the building materials. Improvements in the quality of services is largely a reflection of public policy. On the whole, the housing upgradation process in Ahmedabad seems fairly common. It can be enhanced further through supportive rather than inhibited by more appropriate strategies by the local governments and housing agencies.

Housing Scenarios 1991-2001

An important finding emerging from our study is that the housing situation in a given urban area is critically linked to the overall condi-

tions in the housing market and buoyancy of the economy. Thus minor tinkering with a few projects, no matter how innovative and successful they are cannot comprise an adequate housing strategy. Even if minimum needs of only the lowest economic strata and the 'homeless' have to be met, it is essential to view the needs and especially housing demand of at least the middle income groups. Without such a perspective, no matter how well intended the programmes are, they will simply filter up in light of the unfulfilled demand of the middle strata.

In view of this perspective we first put forth the likely scenario of housing needs and demand in Ahmedabad during the decade 1991-2001. A number of different policy implications are then discussed in this context.

Additional Housing Requirements

Our projections suggest that Metropolitan Ahmedabad is likely to double its population from 2.63 million in 1981 to 5.34 million in 2001, if it continues to grow at the present annual rate of 3.56 per cent. Based on the past trends of population growth for each of the five areas, the future zonal distribution of population can be estimated. Assuming that the income distribution and the vacancy rates observed in each zone would also prevail in future, the housing requirements disaggregated by zone and income class during 1991-2001 would be as presented in Table 4.

TABLE 4 ADDITIONAL HOUSING REQUIREMENTS DURING 1991-2001

Zone	Vacancy rate	Income group					Total
		0-700	700-1100	1110-1500	1500-2000	2000 & more	
Walled city	11.0	1,003	779	22	174	16	1,994
East AMC	8.0	13,154	30,428	21,157	14,993	23,719	1,03,451
West AMC	15.0	3,855	6,390	10,835	7,911	25,696	54,687
East Peri	8.0	33,492	31,198	6,578	7,150	4,778	83,196
West Peri	11.0	20,176	26,497	25,318	13,529	16,905	1,02,425
TOTAL		71,680	95,292	63,910	43,757	71,114	3,45,753

These estimates of housing requirements have some meaning only when reviewed in terms of the implications for land, finance and the nature of housing systems. Although each of these three are critically interlinked, it is first necessary to review them individually.

Land Requirements

The aggregate additional requirement of gross residential land, will work out to be 5800 hectares, if we assume the built up area norms for various categories as suggested by HUDCO with an average FSI of 1.0 and assuming 45 per cent of land for circulation and community facilities. Alternatively, if one uses the existing house sizes as revealed through our survey, the land requirements will be 2500 hectares.

Of these aggregate requirements, the share of the low income groups is as little as 10 per cent. On the whole, the land requirements are extremely sensitive to the plot areas of the higher income groups. A marginal decrease in these can lead to a substantial decrease in the residential land requirements. It is truly ironic that despite the general consensus on 'scarcity' of serviced land within the urban areas, the local authorities continue to impose minimum plot sizes through the building regulations rather than working out fiscal disincentives for larger plots.

The implications of these land requirements for the various zones of the city are that in the East AMC, where the existing gross residential densities are 427 persons per hectare, the situation is likely to worsen considerably as the required land is not likely to be readily available in this zone. Instead the densities will probably reach to about 600 persons per hectare, a level similar to some of the pockets in the Walled city of Ahmedabad. While it is likely that a part of this increased pressure on East AMC will be absorbed by the Eastern peripheral areas, the over crowding of existing low-income settlements cannot be ruled out. On the other hand, in Western Ahmedabad, densities may not rise rapidly from its present low level. This obviously would entail a heavy cost for the local authorities to provide additional services in the peripheral areas.

Demand for Housing Finance

Within the housing support policy framework, it is necessary to estimate the likely aggregate demand for housing finance. In a detailed strategy formation exercise it would even be necessary to identify the demand from various income groups and for different preference patterns. We have, however, estimated only the aggregate housing demand in this study through two alternative estimations.

In the case it was computed that the investments in housing in the year 1981, are of the order of Rupees 39 crore.

The estimated investments based on the average annual accretion to the housing stock during 1971-81 and using weighted average cost of new housing in 1981 are 39 acres. The housing investment is thus about 6 per cent of the Gross City Product in 1981. If the same rate of investment, is assumed to prevail in the future, the cumulative housing invest-

ments in the city during the decade of 1991-2001 is likely to be around Rs. 498 crore.

An alternative estimate of the potential housing demand is based on the observed expenditure patterns in the survey. Based on the income elasticity of demand estimates, the effective housing demand in Ahmedabad during the decade was projected to Rs. 935 crore. This potential demand for housing is indicative of the likely response from potential home owners, conditional to the fact that the housing supply system will respond to this demand by ensuring adequate housing at appropriate locations and that liberal housing finances will be forthcoming. As we can see the potential demand is nearly twice the estimated housing investment in the economy. This suggests the need to examine the supply side of housing.

Housing Supply System

As against the projected housing requirements of 3.4 lakh units for the decade, the average annual supply of formal sector housing in Metropolitan Ahmedabad is not likely to exceed 10,000 units based on past trends. Thus at this rate, less than one-third of the housing requirement is likely to be met by the formal sector housing in the next decade. The informal sector, which presumably would absorb the balance, also has a limited supply. Past records indicate that, on an average, about 5500 housing units are added by this sector each year.

It is thus likely that extensive subdivisions of the existing stock will take place in response to increasing pressures. A substantial proportion of the households will probably also have to double up in the existing stock and live in extremely crowded conditions. Interestingly, there are likely to be some imbalances in the different sub-markets. In the past formal sector has largely catered to higher and upper middle income strata only. Thus, unless the formal sector manages to change the nature of its product in response to the lower income group preferences, there will probably be a glut in this sub-market.

On the other hand the quasi-legal development catering to the low-income groups will be much more successful. These processes already seem to be underway in Ahmedabad housing market as evidenced by the inability of specific formal sector suppliers to sell the houses (and/or plots) while the quasi-legal developments are on the rise. The prices on the other hand are 'sticky' in the short run, though they may fall in real terms over longer duration unless indirect tax measures render holding of vacant property expensive. Such imbalances may occur in specific sub-markets as delineated by the important attributes of location, tenure and shelter quality.

POLICY DIRECTIONS

Given the scenario for the coming decade, the important questions that emerge are:

1. What measures, direct and indirect, are necessary to ensure that the derived land requirements will be catered to?
2. How will the demand for housing finance be adequately met?
3. How can the various supply systems in the city be influenced to facilitate a better matching of supplies with needs, preferences and demand while ensuring at least the basic minimum standards for the disadvantaged groups?
4. What changes are necessary in specific legislation (like Rent Control Act) to reduce the inequities in the housing system while ensuring an overall growth?
5. What is the nature of reorientation in the institutional structure to meet the challenges posed by the above questions? How can this be achieved?

Land and Services

- (a) In light of the estimates for derived land requirements, it is necessary in the short run to make full use of the town planning scheme mechanism which can easily ensure adequate land for low-income housing needs at least in the peripheral areas of Ahmedabad. Our estimates suggest that this is easily possible within the existing legislative framework. Similarly, the fiscal mechanisms of the recently amended Town Planning Scheme legislation must be fully utilised to provide services with full cost recovery from the original owners. Proper phasing of such land development programme is essential to ensure that building activities follow land development and not the converse that happens today.
- (b) At the same time, indirect measures to facilitate utilization of unbuilt floor space within the city would lead to more efficient use of the existing land resources. These indirect measures may be in terms of transfer of development rights, property tax based on an index of the level of utilisation of FSI or other similar measures.
- (c) More importantly, in the long-term perspectives, it is necessary to evolve a spatial structure which balances the location of major employment centres in the Western zones to reduce the pressures on land for the lower income groups in the Eastern zones. It would be necessary to especially earmark adequate land for low-income housing near the proposed work areas. Thus both the urban land-use planning and the town planning scheme mech-

anisms should be effectively used to guide the pattern of development in a more balanced manner and ensure access of low-income groups to land at the right time, place and prices.

- (d) The crucial question with respect to land is not really its availability but its adequate servicing. The local authorities especially in the periphery, have failed to deliver in this respect. These problems, however, appear surmountable, if the necessary financial assistance is forthcoming for these agencies. The second question concerns an adequate servicing of low income settlements, especially with individual facilities. A recent report by AMC estimates that adequate servicing of 'slum' housing within the AMC limits will require only about 17 crore at 1984-85 prices. Even if we consider slum housing in Metropolitan Ahmedabad, by 1991 the necessary investments may not exceed 42 crore. Compared to this the public sector is likely to make an annual investment of almost 20 crore in public housing projects within the city. Thus with only a two year moratorium on housing construction by the public agencies, it would be possible to meet the needs of basic amenities in the slum areas.
- (e) The informal sector has so far managed without any support from the State and at times despite hindrances from it. The only major state support for this sector has been in the form of provision of services at community level to the existing slum settlements. In view of the meagre efforts of the public and formal private sector to reach the urban poor, it is likely that the informal squatters and quasi-legal-housing will continue to be dominant mode of absorption of housing demand of the poor. In Ahmedabad, based on the income distribution and past trends, it is likely that the stock of informal housing may increase from its 1981 level of 118,000 units to about 2890,000 units in 2001. Given this, the state would probably do well to ensure adequate infrastructure standards and provide technical and financial assistance for housing upgradation processes. In the newly emerging settlements, technical assistance for more suitable residential layouts will also be useful.
- (f) Another issue related to land concerns the provision of legal tenure rights for land in existing 'slum' settlements. It is extremely important to distinguish between tenure security (which implies the perception of households for continued residence in a place without undue threats of eviction) and the legal freehold/leasehold ownership. Our findings indicate that though the security of tenure is important as a prerequisite for upgradation processes, the preference for legality is evident only at later stages in life cycle and with higher income attainment. The emphasis on legal

tenure in the upgradation projects sponsored by international agencies, thus appears to be a value bias and is as misplaced as the emphasis on 'pucca shelter' twenty to thirty years ago. It may lead to a host of unintended effects like high turnover, increase in prices and rents which will ultimately oust the lower-income strata pushing them further into the tightening 'informal' market and other over-crowded squatter settlements. The response, however, should be more positive if the demand has come from the local mass based people's organizations which would mitigate the likely unintended effects.

Housing Finance

If the required housing finance is assumed at 70 per cent of the potential housing demand, it implies that nearly Rs. 650 crore (annual 65 crore) will be the likely demand for housing finance. Most general reviews of housing finance systems in developing countries have indicated that at present only 10 to 15 per cent of the demand for housing finance is met through formal institutions. In Ahmedabad also, the formal institutional housing finance has been disbursed to a very small proportion of owners. In situations of limited supplies, the higher income groups are bound to enjoy better access to housing finance.

- (a) On the whole, the recent trends with the proposed National Housing Bank and the concessions in personal income-tax in the latest budget are indicative of the government attitude towards facilitating increased investments in housing. However, most of these benefits are not likely to filter down to the low income strata. Concerted efforts for making the necessary housing finance available to the lower income groups are necessary particularly as their level of demand is low and well within the reach of the existing financial institutions. Besides, one of the major problems with the financial system is a lack of adequate system of grass-roots level intermediaries. Thus, it is extremely necessary to develop a very wide network for access to institutional housing finance. In this light, it may be worthwhile to review the possibility of organizations like Life Insurance Corporation, which have an extensive network of field staff and agents and can directly provide housing finance linked to insurance policies. It may be also possible and beneficial to involve the large number of mass based people's organisations and genuine non-governmental agencies which are already involved in such activities.
- (b) An additional aspect concerning housing finance relates to the need for finance for housing upgradation. Our studies indicate a two fold need in this area. First, the upgradation process is

extremely limited in Ahmedabad despite the fact that rates of residential mobility are very low. One of the major constraints in the upgradation process is a total lack of access to housing finance for this purpose. Thus a large proportion of households, though they feel severely constrained, are unable to improve their housing. While the Gujarat Urban Development project to be funded by the World Bank, may provide some financial assistance in this regard, there is an urgent need for other public and private sector agencies to be involved in this activity.

- (c) The private sector in the city has evolved different mechanisms for gaining access to land. They are thus less constrained by land availability. Their major limitations are with respect to the availability of finance. On one hand, as we discussed earlier given the state of the economy, the speculative investments in the Housing Sector are at a low ebb. On the other hand, the consumptive demand is critically linked to institutional financing. During the sixties and seventies, a dominant role was played by the Gujarat Cooperative Housing Finance Corporation (GCHFC). However, GCHFC has been facing severe resource constraints. Flow of housing finance from other sources, especially HDFC has been growing but its extent so far has been quite limited. The potential demand for housing exists only with appropriate finance. It is thus likely that all the housing of the upper income groups and a very large part of the middle income group can be met through the private sector, if the state, simply facilitates housing finance.

Product Mix and Role of the State

The present continued efforts of both formal and informal sectors account for an average decadal increase of about 15000 housing units in the city. A part of this increase is through a sub-division of housing stock and not through new housing units. It is thus unlikely that given the present systems of production, the requisite supplies of 3400 units per annum will be forthcoming.

- (a) The public sector agencies to a large extent depend on external assistance from HUDCO and other international financing institutions, for their projects. Without an increase in these funds the public sector will not be able to increase its supply. More importantly, there is no effective land management strategy to ensure supply of land at appropriate locations given the fact that these agencies should cater to the low income needs. Thus, a large proportion of recent projects by the public sector have concentrated on the western side simply because land was avail-

able there even though it is locationally quite unsuitable for low income groups. More importantly, however, it is essential to take a critical review of the product mix supplied by the public sector as well as a drastic redefinition in the role of the state especially in view of the housing support policy framework.

We have attempted a number of different simulations of the product mixes to meet the additional requirements for the decade 1991-2001.

- (i) Site and service project for low income groups and 25 per cent of the requirement of other income groups through public housing and the balance by the private sector.
- (ii) Fifty per cent of low income housing needs to be met through upgradation, 25 per cent through site and service projects and the balance of low income housing through projects and similar set of conditions as in (i) above for the higher income groups.
- (iii) For some comparison, we stipulated that all their requisited housing will be built as per the ceiling cost of HUDCO through public and private sector.

It is found that the alternative (iii) would entail an investment of the order of Rs. 1,680 crore, an amount far above the potential demand for housing during the decade. Alternative (i) reduces the investment by about 20 per cent and alternative (ii) reduced the investment by about 35 per cent. Thus the investment required in the alternative (ii) will be of the similar order as the estimated potential demand for housing.

- (b) While the package of programmes related to upgradation, sites and services and public housing for the low income groups appear to be a 'least cost' alternative, in light of the findings of this study, it is necessary to incorporate the preferences expressed by each group and the implicit price of different housing attributes, in the design of these projects. For example, through the preference analysis, it was revealed that the threshold range of plot size varied between 30-50 sq.mts. for the low income groups. Projects with lower plot sizes are thus likely to be unacceptable to a large proportion of the low income households.

The low income households also exhibit willingness to pay for a variety of attributes related to work place accessibility, security of tenure and certain minimum level of services. Projects targeted for these income groups must incorporate the above aspects in site selection as well as design. Most importantly, however, the

simulations point out the need to drastically alter the produce-mix of different supplier groups in these directions.

(c) The role of the state today is unfortunately limited to packaged public housing with a few symbolic sites and services projects. A complete revision in its product mix is necessary by according the highest priority to the following:

1. Large-scale and coordinated land development to ensure supply of serviced land to different segments of the market.
2. Service upgrading for all the existing settlements as an ongoing process, at societally affordable minimum standards through necessary cross subsidization.
3. Technical assistance to different supply and user groups especially in areas of residential layouts, upgradation of existing stock, and infrastructure networks.
4. Evolving mechanisms for housing finance system to fully utilise the available potential demand in this sector.

FUTURE DIRECTIONS

A number of policy directions have already been discussed above. Before we end, however, it is important to highlight two important directions for further efforts in this sector. At the local level, there is an urgent need to evolve an appropriate institutional mechanism to coordinate the activities of diverse agencies which influence the housing demand and supplies. It is necessary to develop local level housing strategies with the necessary linkages to upper levels at the state and centre as well as community and neighbourhood groups at lower levels in the hierarchy. This must be within the perspective of the role of the state as a facilitator and thus a housing support policy framework. For this, a massive restructuring of these agencies and the personnel is necessary. A long term and intensive training programme will be essential to achieve reorientation of the existing personnel. Similarly, significant changes in the existing education of planners, economists, social workers, architects and engineers who may ultimately be involved in the housing sector are also necessary.

No matter how effective such policy change prove to be, the resource constraints identified in the previous section clearly indicate continuing conflicts for distribution of such scarce resources. This suggests that even the most efficient and equitable policies also will never be adequate enough. The housing question will for a long time to come be essentially in the realm of political struggles and, therefore, the need to strengthen the organisational capacities of the more disadvantaged sections.

This then may also become an essential element of the overall housing strategy. It is the combined directions evolving from a totally redefined housing support policy framework with the grassroots strengthening of mass based people's organizations which will take a quantum leap for the Housing Sector in the coming years. □

Integrated Development of Small and Medium Towns in Tamil Nadu

N. ASHOK KUMAR

IT IS often said that unabated growth of urban population becomes the base for a variety of problems requiring immediate government attention. An ever increasing demand for basic services can be noticed in not only big cities but even in small and medium towns too. Severe economic constraints on local bodies have contributed to the notion that 'some one' other than the local self-governments have to come forward to rectify the situation. Different types of mechanisms have been evolved to encourage the urban local bodies to seek and accept financial assistance—in the form of total grant as well as term credits, thus encouraging financial autonomy. This does not, however, mean that the central and state governments have abrogated their responsibilities. But whatever they did during the first four five year plans in the field of urban sector had been very minimum and piecemeal in nature. Growth of urban population on one hand and concentration of urban population in class I cities (see Appendix I) demanded immediate solution, resulting in various urban development projects that are being designed, launched, of which a few are completed, discontinued and others are under progress. Interestingly, these projects are both nation-wide and state-wide from the point of application. As a part of nation wide urban assistance, the Central Government launched in 1974-75 the Integrated Urban Development Programme but that was limited to metropolitan cities with a population of 3 lakh and above, but was subsequently discontinued in the year 1979. The reason was that the programme could not achieve the objectives for which it was sponsored. Instead, the Union Government introduced—during the Sixth Five Year Plan—another most comprehensive urban assistance programme on the advice of a task force¹

¹ To defuse the problems of urbanisation, the Central Government constituted a task force on Planning and Development of Small and Medium Towns and Cities to study the alternative to IUDP. Viewing the growth and pressure on the metropolitan cities, and to restrain the uncontrolled and haphazard growth of metropolitan cities the task force suggested development of small and medium towns.

known as IDSMT. The programme was initially planned for 5 years but subsequently was also included in the Seventh Five Year Plan. During the Sixth Five Year Plan, the Central Government initially had identified 237 towns all over the country of which 72 were from the states in the Southern Region. The performance of different states has varied both—qualitatively as well as quantitatively. The present article is an attempt to analyse the implementation of IDSMT programme in the state of Tamil Nadu during 1980-86. The analysis is limited to the scheme implementation under central sector only, that too, from the point of physical and financial aspects. The paper is based on primary and secondary information collected from various sources in the sample state.

Selection of Towns in the State

As per 1971 census, there are 241 towns in Tamil Nadu State, of which 225 have less than one lakh population. The State Government covered 28 towns from among the 225 towns under the IDSMT Scheme. All the districts have a fair proportion of representation in the selected list. The 28 towns include district and taluk headquarters, mandi or market centres, tourist and pilgrimage centres. Some of the towns are also noted for institutions like hospitals, others are for cottage industries and rail junctions. Individual population of all the 28 towns was below one lakh as per 1971 census. Out of 28 towns, (as per the 1971 census), 7 are class II and 19 are class III (See Appendix II).² There is a regular flow of people from the towns to the cities and *vice versa* as some towns are in the vicinity of bigger cities and the State capital. It is further interesting to note that the towns are selected on the basis of contiguity. For instance, Udagamandalam, Coonoor, Mettupallyam, Pollachi, Udu-malpettai; Palani, etc., are located one after the other. The selection of towns on the whole was done in accordance with the Central Government guidelines, both from the point of population³ and other indicators like economic activities, availability of infrastructure facilities in the towns.

Project Identification and Formulation

The Tamil Nadu Government had confined the projects to the three components, viz., sites and services, mandies and markets and traffic and transportation, broadly conforming to the central guidelines. All the three sectors form component 'A' for which the central government takes

²The minimum population amongst the 28 towns is 20,836 and the maximum population is 68,655 as per the 1971 census figures.

³1971 census population figures for the rest two towns were not available.

the responsibility to finance.⁴ The other component, 'B' of IDSMT programme which is mostly service oriented project rests on the State government from the point of financial assistance. Implementation of 'B' component in the state was only piece-meal but not in confrontation to the central guidelines. The urban local bodies in the State were not actively involved in the identification of projects for various reasons, notably lack of required expertise. The responsibility for designing and formulating the projects had to be shouldered by the Regional Directors of Town and Country Planning Organisations in consultation with the local bodies. The project proposals are also required to be approved by the Director of Municipal Administration. The problem of competence is also observed in respect of scheme execution. Again for the same reason of lack of technically qualified personnel, most of the projects have been implemented by the State government departments, namely, PWD (Buildings/Highways), the TWAD Board, TNSEB, etc. In a few towns those projects not requiring high level technical knowhow were executed by the municipalities themselves.

Scheme Implementation—The State of Art

As has already been stated, the performance of the IDSMT scheme in the State was studied based on the physical and financial progress during 1980—March, 1986. The former in terms of number of projects completed since 1980 as against the total number of projects formulated under each sector. On the other hand, the financial progress is analysed in terms of amount spent as against the total financial assistance received.

Financial Progress

The total approved outlay on the programme for the entire state was Rs. 2,169.68 lakh. The Governments of India and Tamil Nadu released Rs. 1,963.29 lakh. Out of this total amount released, all the 28 towns covered under programme could spend an amount of Rs. 1,512.75 lakh till March, 1986. This means about 77 per cent of the total amount disbursed by the state government was utilised. The reasons for not spending

⁴The component 'A' includes sites and services, Mandies and Markets, Traffic and Transportation, Industrial Estate, Tourist Homes, Slaughter Houses and Low Cost Sanitation (included in the central sector only in 1983-84). Among these, few are highly remunerative, others are either marginal or no revenue oriented ones. As far as Tamil Nadu is concerned the first three sectors are only adopted. The sites and services includes acquisition and development of land, while the traffic and transportation covers both formation of new roads and widening of existing roads, provision of bus shelter, truck terminals, taxi and lorry stands. On the other hand, mandis and markets includes construction of shops, super and sub-markets, warehouse and godowns and remodelling the existing municipal markets.

all the entire amount are multiple—like delay in according technical and administrative sanctions, delay in the release of funds itself, problem of land litigations,⁵ blockages in inter-departmental coordination, non-availability of construction materials, labour and contractors in time. Townwise, utilisation of funds vary from one to the other. Out of the 28, three towns could spend more than 90 per cent of the funds received while 15 towns could spend more than 75 per cent but below 90 per cent and the remaining 10 could spend more than 50 per cent but below 75 per cent (see Appendix III). Thus from the point of amount invested on the projects about 10.7 per cent of the towns only showed satisfactory performance (90 per cent and above).

The investment pattern—component wise reveals that a majority of the municipalities had given priority to the highly remunerative sector namely, market and mandies followed by traffic and transportation. Next to these, sites and services were given the preference. This can be seen from the amount invested on each of the three components. While Rs. 734 lakh (49%) was spent on projects under market and mandies, Rs. 684 lakhs (44%) on projects under traffic and transportation and the remaining Rs. 110 lakh (7%) on sites and services (see Appendix III). Out of 28 municipalities, 14 municipalities have not undertaken any project under sites and services but concentrated on the other two. It is seen that in one of the 28 towns, all seven projects were under mandies and market sector only. Thus, it can be inferred that projects under market and mandies are the most popular in all the 28 towns. It is possible to surmise that the municipalities kept income as the primary objective while formulating the projects, which is of course, one of the primary objectives of the IDSMT scheme.

Physical Progress

Altogether 171 projects were formulated by the state government for all the 28 municipalities under the IDSMT programme. As said earlier, all the 171 projects were within the three components giving much importance to market and mandies sector. Out of the 171 projects, 98 (57%) are under market and mandies, 58 (34%) are under the traffic and transportation and the rest 15 (9%) belong to the Sites and Services group (see Appendix II). So, from the points of allocation of funds and the number of projects allocated to each sector the programme in Tamil Nadu is mostly oriented towards institutional development which of

⁵In Tamil Nadu land litigation problem is of two types: (i) encroachments on public lands; and (ii) acquisition of private lands in view of rising in urban land values. In few towns like Sivaganga, Arakonam and Tiruvannamalai, Pollachi, Kovil Patti, Theni where because of land acquisition problem projects have not been completed as anticipated.

course is one of the objectives of the IDSMT scheme launched by the Central Government.

As far as the physical progress in all the 28 municipalities during 1980-86 is concerned, only one out of 28 towns could complete all the projects within the prescribed time. The state of implementation in the remaining 27 towns is as given in Table 1.

TABLE 1 STATE OF COMPLETION OF PROJECTS (BETWEEN 1980-86)

<i>Sl. No.</i>	<i>State of completion (in percentage)</i>	<i>Number of towns</i>
1.	100	1
2.	Above 75 but below 100	4
3.	Above 50 but below 75	14
4.	Above 25 but below 50	6
5.	Less than 25	1
6.	Zero	2
Total		28

SOURCE: D.T. and C.P., Government of Tamil Nadu.

The table reveals that except two, the remaining 25 towns could complete the programme ranging from 25 per cent to 99 per cent. Four towns could complete scheme above 75 per cent but below 99 per cent while the predominant number of towns (14) fall between 50 per cent to 75 per cent. The remaining belonged to less than 50 per cent. Progress in two towns was zero during the span of six years. While this is general picture of performance in the state, componentwise performance in different municipalities showed a marked variance (see Table 2).

TABLE 2 PROJECTS—COMPONENTWISE YET TO BE COMPLETED BY THE MUNICIPAL TOWNS

(In percentage)

<i>Sl. No.</i>	<i>Percentage of projects yet to be completed</i>	<i>Number of Towns</i>		
		<i>Sites & services</i>	<i>Traffic & transportation</i>	<i>Markets & mandies</i>
1.	100	11	12	2
2.	Above 75 and below 100	—	—	1
3.	Above 50 and below 75	1	8	8
4.	Above 25 and below 50	—	—	4
5.	Less than 25	—	1	1
Total		12 (14)	21 (27)	16 (28)

SOURCE: D.T. and C.P., Government of Tamil Nadu.

Implementation of projects—componentwise, reflects different patterns in different municipalities. From the above table it can be drawn that out of 14 towns which undertook the projects under sites and services only 2 towns could complete cent per cent. While in the remaining 12 towns, one has yet to achieve 50 per cent of the target and 11 towns showed 100 per cent blank. Similarly, out of 27 towns which undertook the projects under traffic and transportation, except 6, the remaining 21 towns are at various stages of completion. Majority of the towns (12) have not completed even a single project, while 8 towns have completed 50-75 per cent of the projects under this component and one town is yet to reach at least 25 per cent of the target. In the case of market and mandies also, out of all the 28 towns which undertook this component, 12 towns achieved cent per cent target while the remaining 16 are at various stages of completion: two are still cent per cent blank; one town is yet to reach 75-99 per cent while 8 towns are yet to complete 50-74 per cent of the total number of projects, and 4 towns to cover 25-50 per cent of the total number and the remaining one is lagging behind at less than 25 per cent of the total number.

Implementation Style

We have earlier seen that all the 28 municipal towns fall under two classes of towns based on the size of population. Out of the 28 towns, a few are even taluk, district and revenue division headquarters. From the progress made in each municipality, it is observed that there is no relationship between the state of implementation and the status and location of the towns. Performance of the programme in different towns grouped under the two different classes can be seen in Table 3.

TABLE 3 PERFORMANCE (IN PERCENTAGE) OF THE IDSMT SCHEME IN 28 TOWNS IN TAMIL NADU—CLASSWISE

Sl. No.	Class category of the towns	State of implementation of the programme (Percentage)						Total
		Zero	100	75-99	50-74	25-49	Less than 25	
1.	Class II	1	1	3	8	4	—	17
2.	Class III	1	—	1	6	2	1	11
Total		2	1	4	14	6	1	28

SOURCE: D.T. and C.P., Government of Tamil Nadu,

From Table 3 it can be seen that, (as per 1981 census), out of the total 17 class II towns, only one could complete cent per cent of the programme. In contrast to this, another town of the same status showed zero performance. Of the remaining 15 class II towns, only twelve could succeed in making up to 74 per cent progress. Similarly, performance among the class III towns, one town showed zero and another town could cover 75-99 per cent of the target and the remaining 9 towns achieved less than 75 per cent of the fixed target. The different degree of implementation of the scheme in all the 28 municipal towns can be attributed to various inter-linked factors, such as:

- (i) formulation of projects not relevant to the actual needs of the towns;⁶
- (ii) poor and faulty selection of sites leading to litigation in the land acquisition;⁷
- (iii) non-availability of lands within the municipal limits;
- (iv) lack of effective coordination between the implementing departments and the local bodies;⁸
- (v) lack of required technical expertise at the local body's level;
- (vi) lack of seriousness in holding the review meetings regularly;⁹
- (vii) cumbersome procedure and delay in the release of funds;¹⁰

⁶This was primarily due to formulation of projects by those who did not have adequate appreciation of the needs of the towns. The local bodies had no role either in identification or preparation of projects. The other reason is absence of demand survey before the formulation of projects resulting in either change of use of the completed projects or dropping out the projects proposed. For instance, in Udagamandalam, it was observed that the completed projects like lodging rooms, lorry stands and taxi stands have been converted to shopping complex.

⁷Experience in various towns in Tamil Nadu, (for instance, Pollachi, Theni, Arakonam, Tiruvannamalai) and other states like Karnataka and Andhra Pradesh showed ample evidence of projects under sites and services as well as traffic and transportation sectors could not be completed well in time mainly due to faulty selection of sites resulting in land litigations. In Pollachi, for instance, it was noticed that one of the two projects under traffic and transportation sector was delayed and the other was dropped after a lapse of five years only because of land litigation problem. Similarly, in Karnataka, due to the same problem, the state could develop only 158 hectares of land as against the target of 404.32 hectares as on March, 1986.

⁸Due to lack of expertise, state departments are entrusted with the execution responsibility and quite often the arrangement causes delay. This is because the state agencies and/or departments have their own priority and are not in a position to spare their staff for IDSMT project works.

⁹During the field survey in Tamil Nadu, it was seen that in few towns it takes 6 to 8 months to hold review meetings. In one town (Pollachi) the latest monitoring meeting was held in July, 1987.

¹⁰During the field survey in Udagamandalam the instalment-wise release of funds was noticed as follows: first instalment (13th May, 1980); second in 11th August, 1981; third on 1st December, 1982, fourth on 12th August, 1983; fifth on 22nd July, 1983; sixth on 18th March, 1985; seventh on 27th April, 1985, and eighth on 10th May, 1985.

- (viii) delay in according technical sanction;¹¹
- (ix) poor participation of local public; and
- (x) frequent transfers of municipal officials and political interference.

In the light of obstacles and problems which the IDSMT towns are facing during the implementation of the programme, the state government should take just and immediate measures to remove problems and obstacles for the effective and successful implementation of the programme in the state. Problems like administration of land litigation cases, frequent transfers of officials, delay in the release of funds, coordination between the local bodies and implementing departments and selection of projects must be given higher importance than they received heretofore. On the whole, the municipalities in the state have successfully demonstrated their ability to carry out the programme.

¹¹Of course, this trend was before the State Government constituted an Engineering Cell with the S.E. at apex in the Directorate of Municipal Administration to avoid delay pertaining to the technical matter. This is considered a positive step in this regard.

Appendix I

URBANISATION IN TAMIL NADU AND INDIA

Sl. No.	Size Class of Towns	No. of Towns/UA			Percentage of Population to Total Urban Population				
		1951	1961	1971	1981	1951	1961	1971	1981
1. I		8 (74)	11 (102)	16 (145)	20 (216)	41.79 (44.31)	47.52 (50.77)	57.74 (56.21)	62.19 (60.37)
2. II		12 (95)	19 (129)	27 (178)	37 (270)	11.61 (9.95)	14.09 (11.00)	14.16 (11.24)	15.99 (11.65)
3. III		49 (330)	49 (449)	57 (570)	63 (735)	21.20 (15.79)	17.26 (17.41)	15.11 (16.32)	12.52 (14.35)
4. IV		80 (621)	95 (732)	86 (847)	82 (1048)	14.86 (13.79)	14.28 (13.00)	9.89 (11.20)	7.40 (9.52)
5. V		89 (1146)	76 (739)	44 (641)	37 (742)	9.22 (13.04)	6.30 (7.03)	2.77 (4.57)	1.76 (3.61)
6. VI		26 (578)	15 (179)	11 (158)	6 (280)	1.32 (3.12)	0.55 (0.79)	0.33 (0.46)	0.14 (0.50)

Source: *Sensus of India, 1981.*

Note: Figures in bracket relate to India.

Appendix II

CHARACTERISTICS OF THE SELECTED TOWNS AND NUMBER OF PROJECTS COVERED UNDER THE PROGRAMME

Sl. No.	Name of the Town	Local body and its grade at the time of selection	Size class of the Town		Population		Admini- strative status	Number of Projects covered				Total
			1971	1981	1971	1981		S.S.	T.T.	M.M.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
1.	Udhagamandalam	SL.GR.MPT.	II	II	63289	78277	DT.HQ.	1	4	4	9	
2.	Karur	I.MPT.	II	II	65690	72692	TQ.HQ.	2	2	1	5	
								(1)	(1)			
3.	Dharmapuri	II.MPT.	III	II	40086	51223	DT.HQ.	1	3	1	5	
								(1)				
4.	Puddukottai	I.MPT.	II	II	66384	87952	DT.HQ.	0	4	5	9	
										(1)		
5.	Tiruchengode	II.MPT.	III	II	36990	53941	TQ.HQ.	0	2	2	4	
									(2)	(1)		

6.	Gobichettipalayam	I.MPT.	III	III	36359 43862	TQ.HQ.	1 (1)	2 (1)	4 (1)	7
7.	Mannargudi	I.MPT.	III	II	42783 51738	TQ.HQ.	1 (1)	6 (1)	11 (6)	18
8.	Mettupalayam	I.MPT.	III	II	48165 59537	TQ.HQ.	0	2 (2)	1	3
9.	Chengalpattu	II.Gr.MPT.	III	III	38419 47329	DT.HQ.	0	3 (2)	5 (3)	8
10.	Coonoor	I.Gr.MPT.	III	III	38007 44750	TQ.HQ.	0	1 (1)	4 (2)	5
11.	Dharapuram	II.Gr.MPT.	III	III	40088 42263	TQ.HQ.	0	3	4 (2)	7
12.	Palani	I.Gr.MPT.	III	II	49575 64444	TQ.HQ.	0	1 (1)	1	2
13.	Attur	I.Gr.MPT.	III	II	41569 50517	TQ.HQ.	1 (1)	1 (1)	5	7
14.	Thiruvannamalai	I.Gr.MPT.	II	II	61370 89462	TQ.HQ.	1 (1)	3	2 (1)	6
15.	Udumalpet	I.Gr.MPT.	III	II	39343 54852	TQ.HQ.	0	0	7 (3)	7

(Continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
16.	Namakkal	IL.Gr.MPT.	III	III	29983	39782	TQ.HQ.	0	3	3	6
17.	Kovilpatti	II.Gr.MPT.	III	II	48509	63964	TQ.HQ.	0	2	4	6
18.	Ranipet*	IL.Gr.MPT.	III	III	29281	35974	TQ.HQ.	1 (1)	3 (2)	3 (1)	7
19.	Pollachi	SL.Gr.MPT.	II	II	68655	82354	TQ.HQ.	1 (1)	1 [†] (1)	4	6
20.	Theni	II.Gr.MPT.	III	II	34854	53018	—	0	2 (1)	3	5
21.	Hosur	N.K.	N.A.	III	N.A.	27119	N.A.	1	1 (1)	4	6
22.	Nagapattinam	I.Gr.MPT.	II	II	65023	82828	TQ.HQ.	0	3 (2)	5 (3)	8
23.	Karaikudi	I.Gr.MPT.	II	II	55450	66993	DT.HQ.	1 (1)	1 (1)	2 (2)	4
24.	Kallakurichi	N.K.	N.A.	III	N.A.	26905	N.A.	0	1 (1)	4 (3)	5
25.	Panruti	II.Gr.MPT.	III	III	34065	43042	TQ.HQ.	1 (1)	1 (1)	2	4

26.	Arani	II.Gr.MPT.	III	III	38669	49365	TQ.HQ.	0	1 (1)	2 (2)	3
27.	Sivaganga	III.Gr.MPT.	III	III	20836	24832	TQ.HQ.	1 (1)	1 (1)	2	4
28.	Arakkonam	II.Gr.MPT.	III	II	43347	59405	TQ.HQ.	1	1 (1)	3 (2)	5
TOTAL					—	—	—	15	58	98	171

*Ranipet is one of the three towns grouped together as one town. The other towns are Walajapet and Arcot municipalities. Hence it is called Ranipet, Arcot and Walajapet complex. Both the Walajapet and Arcot are taluk headquarters and Grade III and II municipalities respectively.

†In September 1986, one of the two projects under TT was dropped. Hence the total number of projects is only 6.

Source: (i) Municipal Directory, 1986, Tamil Nadu Institute of Urban Studies, Coimbatore and Census of India, 1981.

(ii) DT & CP, Government of Tamil Nadu.

Note: Figures in bracket are the number of projects yet to be completed as on March, 1986.

Abbreviations: SL.=Selection; Gr.=Grade; MPT.=Municipality; DT.HQ.=District Head Quarters; TQ.HQ.=Taluk Head Quarters; S.S.=Sites & Services; T.T.=Traffic and Transportation; M.M.=Market and Mandies; N.A.=Not Available.

Appendix III
FINANCIAL PROGRESS OF IDSMT IN TAMIL NADU
AS ON 31-3-1986

(Rs. in lakh)

Sl. No.	Name of the Town	Per cent- age of Ex- penditure to total release	Amount Spent on Projects		
			S.S.	T.T.	M.M.
(1)	(2)	(3)	(4)	(5)	(6)
1.	Udagamandalam	97.57	9.25	20.57	47.24
2.	Karur	92.12	11.04	43.05	8.55
3.	Dharmapuri	79.01	7.91	44.37	10.49
4.	Puddukkottai	61.89	—	32.74	16.49
5.	Tiruchengode	61.00	—	23.05	23.31
6.	Gobichettipalayam	77.36	—	25.56	32.52
7.	Mannargudi	77.09	3.81	24.55	47.62
8.	Mettupalayam	85.85	2.81	46.66	10.00
9.	Chengalpattu	76.84	—	23.63	36.94
10.	Coonoor	54.93	—	5.94	19.33
11.	Dharapuram	80.34	—	20.16	40.49
12.	Palani	87.48	—	28.64	20.00
13.	Attur	88.49	—	29.29	25.85
14.	Tiruvannamalai	88.05	14.93	44.89	12.87
15.	Udumalaipettai	76.32	7.31	—	59.40
16.	Namakkal	94.81	—	46.84	27.57
17.	Kovilpatti	67.25	—	17.53	28.20
18.	Ranipet Complex	82.34	—	38.58	17.81
19.	Pollachi	83.21	9.48	9.79	50.38
20.	Theru	80.79	6.40	19.50	41.90
21.	Hosur	89.36	—	14.28	26.22
22.	Nagapattinam	69.92	22.34	30.22	21.87
23.	Karaikudi	51.20	5.73	7.00	13.38
24.	Kallakurichi	71.36	—	20.95	29.00
25.	Panruti	61.26	1.48	24.67	15.50
26.	Arni	82.46	—	23.18	19.70
27.	Sivaganga	58.53	—	7.25	17.80
28.	Arkonam	58.09	8.50	10.94	23.55
TOTAL		77.05	110.90	683.83	733.98
		(average)	(7%)	(44%)	(49%)

SOURCE: D.T. & C.P., Government of Tamil Nadu.

Abbreviation: S.S. = Sites and Services; T.T. = Traffic and Transportation;

M.M. = Market and Mandies.

*Environmental Improvement of Urban Slums: Hassan Experience**

A. MALLA REDDY

URBANISATION IN India has brought rapid changes in the process of settlement. The wide scope of economic activity in urban areas have generated the scope for employment in the formal and informal sectors when compared to the rural scene which has limited seasonal scope of engaging the labour. This process has resulted in large scale increase of urban population especially in the lower income groups. Thus leading to formation of the slum areas in the urban centres. The slums are formed with the absence of proper shelter and civic infrastructure, which lead to unhealthy living conditions. The Government of India has introduced the Environmental Improvement of Urban Slums with an intention to improve living conditions and providing civic amenities to the slum areas predominantly lived by the poor.

The scope of this article is limited to study the EIUS programme in Hassan Town in Karnataka state. The Karnataka state is one of the states in the country which developed separate board to improve the slum areas. Reasons for the selection of this town are it is one of the town where all the recognised slums are covered under the EIUS programme. Amount sanctioned to the town in sixth plan period is incurred completely. The article attempted to study the impact of the EIUS programme, problems encountered in the execution of the programme, and suggest measures to improve the execution of the programme.

URBAN SCENE

In India the urbanisation has created several imbalances and deficiencies in the urban areas. As per the 1981 Census, 159.7 million¹ people were reported to be living in over 3,200 urban settlements of various

*Views expressed in the Article are personal and do not reflect the department associated with.

¹Census of India 1981, Final Population Totals, Paper I of 1982.

sizes constituting 23.73 per cent to the total Indian population. In the 1971 census it was 109.1, between 1971-81, about 50.6 million people have increased in the urban population. Incidentally the growth rate 46.41 per cent registered in this decade was highest compared to the previous highest being 41.49 per cent witnessed during the 1941-51 decade.

Amongst different states in India, Karnataka is one of the more urbanised states. It ranked fifth in the degree of urbanisation in 1971, it ranked fourth in 1981 census.

The total population of Karnataka increased from about 13.05 million in 1901 to 37.04 million in 1981, i.e., an increase of 283.75 per cent. During the same period urban population grew from 1.64 million to 10.71 million, an increase of 653.16 per cent. As a result the proportion of urban population went up from 12.56 per cent to 28.91 per cent.

The urban population in 1971 was 7.20 million constituting 24.31 per cent to the total population of 29.30 million. As per the 1981 census the urban population has increased to 10.70 million constituting 28.91 per cent of the total population. It is higher than the national rate. While the state's rural population increased by only 18.7 per cent during 1971-81 the urban population grew by 50.29 per cent².

The estimated urban population in Karnataka state by 1990 is 16.5 million, out of which the slum population is estimated to grow up to 3.1 millions.³

Some of the reasons for the abnormal urban growth are excessive concentration of industrial, commercial and economic activities. These factors have generated diversified job opportunities in these urban centres. The scope of growth has attracted migrants on alarming proportions. The low income labour who are drawn into city have an opportunity to gainful employment but the city system hardly allows them to have good shelter. The rising population has resulted in a great demand for low cost housing land being scarce, rental values in cities are exorbitant and land prices have skyrocketed. It is the poor section who have been worst hit due to the rapid urbanisation.⁴ Most of them look for shelter in cheaper areas or encroach upon urban vacant lands creating slums.

The fast increasing population and rapid industrialisation created urban slums in congested areas with deleterious structures unserved by sufficient water, drainage and sewerage and these areas lack minimum

²Environmental improvement of towns under the centrally sponsored scheme for the IDSMT. Unpublished paper of the Director of Town Planning, Government of Karnataka.

³*A Compendium on Indian Slums*, TCPO, Ministry of Works and Housing, Government of India, New Delhi, 1985, p. 15.

⁴*The Hindu*, April 27, 1987, p. 17.

basic facilities and public amenities. Here are the areas where the poor who cannot afford the city's good life live in filth under unhygienic conditions⁵.

The problem of slum has been faced by almost all the countries in the world, only the degree defers. One of the major problem which most of the countries of the world are facing is that of slums. They constitute the most important and persistent problem of urban life. Slums vary from one type to another, but certain general patterns of slum life are universal some critical observers have called the slums of India, the filthiest in the world.⁶

It is claimed that the growth rate of population living in poor conditions and urban slums surpassed substantially the over all growth rate of urban population. According to the estimates made by the task force on housing and urban development (group IV) anywhere between 32 to 40 million persons lived under slum conditions in 1981. It is estimated that the slum population may rise to 51.2 million by the year 1990.

The major urban centres and large size cities are bearing the major extent of urban population. So far the government had been concentrating in the development of major urban centre, neglecting the development of small and medium size towns. The Prime Minister said that India at present had the highest mobility and people were coming into towns which were not prepared physically and environmentally to accept them⁷. The physical and social-economic conditions prevailing in these towns do not enable them to absorb the growing population.

At present these towns have little to offer regarding the services basically essential for their own inhabitants. The Urban environment qualities available in these towns are highly inadequate the Hassan town is one of the typical example. The Municipality is neither able to control the unplanned growth nor able to provide minimum level of facilities and amenities. The Municipality is facing severe shortages of finances, and technical personnel to manage civic affairs effectively. With these deficiencies there has been severe assault on urban environment in the town.

Today the urban environment is not natural environment, it is completely man made. Poverty among the residents is the greatest source of degradation hence the greatest source of pollution. In the desperate attempts to survive the slum dwellers have started living in stink, filth and sub-human conditions damaging the environment in which they live. Today the main concern of the government is how to control the

⁵Gopal Barghava (ed.). *Urban Problem and Perspectives*, Abinab Publishers, New Delhi, 1981, p. 295.

⁶S.N. Singh, "Slums, Clearance and Improvement", *Nagarloka*, Vol. IX, No. 1, January-March 1977, p. 87-88.

⁷*The Hindu*, January 8, 1987.

degradation of urban environment especially in the slums and backward pockets.

Human life is largely governed by two fold factors, genetic and environment. If genetic embodies the contributions of biological make-up, environment is the world we live in. The environment is everything that surrounds and human beings dependence on environment is inevitable, it has a direct bearing on the life and growth. Life has been described as a continuous adjustment of internal function to external conditions. Also it is a continuous interaction between the organism and the environment. In this complex situation, the entire body mechanism will have to undergo rapid changes in its attempt to adjust itself to its surroundings.⁸ Since the capacity of a living organism is limited to survive in a changing environment, the environment itself has to be modified to suit the human organism for survival and existence.

Research advances in environmental monitoring have drawn the world community to an awareness that our health and quality of life and the fate of future generations are in dangerous situations. Suitable actions have to be undertaken today to sustain the conducive environment to avoid catastrophe. The constitution of India under Article 47, 48 A, clearly gives directives to the states to raise the standard of living to improve the public health, protect and improve the environment.

The problem of poverty and poverty level in the city being so high, the degradation of urban environment can only be met by a combination of a large social efforts and public money⁹. The government decided to provide better of living environment through the (EIUS) Environmental Improvement of Urban Slums realising the fast rate of degradation of environment in the slum areas.

EIUS PROGRAMME IN INDIA

Today, EIUS is an important item (IOA) of the Prime Minister's 20-point programme taken up for the upliftment of the weaker sections. The environmental improvement of urban slums is a package of services for the immediate removal of the unhygienic environment prevailing in the slums. It was started with slum clearance and improvement scheme introduced in 1956. The emphasis was shifted from clearance to improvement in the year 1972 through the environmental improvement of slums, as a result of recognition that the policy of clearance and rehabilitation of slum dwellers had become increasingly impractical.¹⁰ It

⁸Krishna Rao Naram, "Men and Changing Environment", published in *Indian Express*, June 10, 1977.

⁹Gopal Bhargava (ed), *op. cit.*, p. 290.

¹⁰Task Force on Housing and Urban Development Group IV, *Shelter for the Urban Poor and Slum Improvement*, Planning Commission, Government of India, New Delhi 1983, p. XVIII.

involve hardship to the slum dwellers and loss of capital assets already created, however sub-standard they may be, the EIUS was taken up with an objective to establish a network of basic services and facilities for social consumption in all the urban areas with nationally accepted norms. Presently the programme is extended to all the urban centres in the country. The state governments are implementing EIUS through the slum boards and local bodies.

The main objectives of the programme are to provide basic amenities in the slum areas predominantly resided by scheduled caste and scheduled tribes which are not intended for clearance at least for ten years. Initially the proposal was to cover only the slums on government land. But latter on it was decided to include the slums on the lands owned by the local bodies and other statutory authorities and also the slums on privately owned lands provided the State Government concerned pass suitable legislation.

EIUS Scheme Proposes to Improve the Living Environment of Dwellers by Providing Basic Facilities as per the following Norms:¹¹

1. Water Supply—one tap for 150 persons.
2. Sewer—open drain with normal outflow avoiding accumulation of water.
3. Storm Water drain, to quickly drain out storm water.
4. Community latrines—one lavatory seat for 20 to 50 persons.
5. Widening and paving existing lanes to make room for easy flow of pedestrians by-cycles and hand carts on paved paths to avoid mud and slush.
6. Street lights—One pole for 30 meters apart.

Initially it was confined to 20 cities. The per capita was fixed at Rs. 120 and raised to Rs. 150 in 1978, and was re-raised to Rs. 250 in April 1984 and further to Rs. 300 per capita during 1985-86. Since 1974 the scheme is being operated in the State Sector. During the fifth plan, the Scheme was extended to all cities with a population of 3 lakh and above. As per the Sixth Plan Document, the estimate of the slum population by 1985 is 33.1 million. It was calculated that approximately 6.8 million people had been covered under improvement schemes up to 1979-80. The balance slum population requiring attention was said to be 26.3 million. The sixth plan aimed at covering 10 million people up to March 1985 and the balance to be tackled the next plan.¹² Approximately 94 per cent of the target group is covered by March 1985, it is expected to cover entire target by June 1985, with actual

¹¹ *A Compendium of Indian Slums*, *op. cit.*, p. 7.

expenditure of Rs. 186 crore.¹³

In the Seventh Plan Rs. 50 crore are provided for the first two years as a starting point. The outlay may be more later. Presently the scheme is in the progress, steadily gaining the popularity among the local bodies to improve their slums.

Karnataka Experience

In the entire state of Karnataka the slum clearance board has identified 965 slums out of which 400 slums are located in the Bangalore city alone. The total number of families living in these slums are 1,39,961, the total population is 9.22 lakh.¹⁴ The Karnataka Slum Clearance Board is the implementing agency for the EUS programme in the state.

So far the Board has provided these amenities to 600 slums at a cost of Rs. 710.51 lakh and covered the population of 5,40,212 on an average expenditure of Rs. 250 per head including central incentive scheme. The Board has also taken up massive rehabilitation programme for clearing some of the objectionable slums and resettling the slum dwellers. This programme is financed by the HUDCO, New Delhi to the extent of 80 per cent and the remaining 20 per cent has been funded by the state government. So far 61 slums are covered throughout the state under this programme, 4502 houses are constructed at a cost of Rs. 300.85 lakh in the entire state.

Totally 600 slums covered under the slum improvement programme and 61 slums covered under the slum clearance scheme. Both put together 661 slums which constitute 67 per cent of the total identified slums are covered under the programme.¹⁵ Since inception of the Board up to end of March, 1986, the Board has spent an amount of Rs. 1,011.36 lakh as against budget provision of Rs. 1,285.74 lakh.

In the entire Hassan District there are 37 identified slums in the urban areas. In Hassan town alone there are 9 identified slums.

About Hassan Town

Hassan town is one of the fast growing centres, it is the district headquarters of Hassan District in Karnataka state. It is located at a distance of 144 km. from Bangalore city, it is situated on the Bangalore and Mangalore Highway.¹⁶ It is centre for tourists, important places like Halebid, Belur and Sravanabelagola are located near the town. It

¹³ *A Compendium of Indian Slums*, op. cit., pp. 8-9.

¹⁴ Karnataka Slum Clearance Board, *Functions and Achievements*, decade report submitted by the Chairman, KSC Board Bangalore, 1986, p. 2.

¹⁵ *Ibid.*, Annexure I.

¹⁶ Project Report, *Hassan Town, Integrated Development of Small and Medium Towns*, TCPO, Government of Karnataka, 1980.

is an important growing centre having located all district level government offices. It is a multifunctional town having trade, industries, commercial service centre, communication centre with medical services. Its hinterland consists of fertile agricultural lands. It is also well known for its shandy conducted on every Thursday. This market caters to the needs of the town and hinterland and supplies commodities to far of places.

It is anticipated that an alround development would take place in and around Hassan town, Hassan is poised for development as a major growth centre midway on the Bangalore and Mangalore axis.

Its population is growing during 1961 to 1971 it was 51,325 and went up to 71,363 by 1981. It is anticipated to reach 1,51,234 by the year 1991 and by the end of the century it would reach 2,00,000 population.¹⁷ It has a developed area of 570 hectares out of which only 182 hectares is residential, it needs major improvements to accommodate the growing population. Income of Municipality has not increased where as the population increased steadily and the expenditure has also increased. The major problems facing the town are lack of proper housing facilities to the growing population. The population density is rising alarmingly. The resource position of the Municipality is very limited, it is unable to meet the minimum obligations. The civic amenities are scarce and are not increased in view of the growing population. The Municipality has no scientific disposal of solid waste and liquid waste, thus causing much damage to the environment in the town. This deficit has created much more chaos in the slums and backward pockets of the town which do not have civic infrastructure. Hassan has been selected under the Integrated Development of Small and Medium towns scheme. Under this programme Rs. 209 lakh have been sanctioned, for the development of the town in central and state sectors out of this Rs. 12.16 lakh is estimated for slum improvement.

The Board staff and the staff of the Municipalities together have identified 9 slums in Hassan town. All these slums are proposed under section 3 of the K.S.C., Act, where EIUS programme is to be taken up on accepted norms. The total slum population in these 9 slums are 9208 and total area covered under the slums are 2,20,000 sq. ft., (see Table 1).

The Board sub-division was formed at Hassan in the year 1980 to cater to the needs of the following three districts: (1) Hassan, (2) Chickmagalur, and (3) South Kanada. The Staff has been sanctioned in the year 1981. The existing staff position is as follows: Assistant Executive Engineer is incharge of the sub-division and he is assisted by two Assistant Engineers and three junior Engineers, supported by the subordinate

¹⁷Projected Population compiled from the draft outline Development Plan of Hassan Town.

staff and FDC, one SDC, one Clerk-cum-Typist and peon. Before the sub-division came into existence improvement work have been carried in the Hassan slums by the Municipality and by the Board grants. After the formation of the sub-division at Hassan it has taken up all the slum improvement work on its own for execution.

TABLE I STATEMENT OF HASSAN TOWN SLUMS*

<i>Sl. No.</i>	<i>Name of the slum</i>	<i>Owner of land</i>	<i>Extent of land in sq. ft.</i>	<i>Population</i>
1.	Slum at Silver Jubilee Park Road,	Municipal	12,700	420
2.	Chikanahli Slum in Pension Mohalla	Municipal	40,000	1,528
3.	Harijan and Mochi Slum in Pension Mohalla	Municipal	42,000	2,309
4.	Chippinakatte Poura Karmika Slum	Municipal & Private	10,800	676
5.	Slum behind KEB Colony	Private	46,000	1,475
6.	Harijan Slum on B.M. Road	Private	14,400	1,050
7.	Slum Behind District Jail	Private	19,600	933
8.	Slums Near H.N. Pura Octroi Gate	Municipal	2,400	167
9.	Rangoli Halla Slum	Municipal	31,500	650

*SOURCE: Compiled from the statistics of the Karnataka Slum Clearance Board, Sub-division Hassan, Lr. No. KSCB/AEE6/HSN/87-88/395, dated 03-07-87.

The sub-division staff had identified the works to be taken up in the slum areas, prepare the estimates of the proposed works and send them to the headquarter at Bangalore for approving the estimates. After due sanctions, the headquarter office calls for tenders and finalises the tenders and assigns the works to the contractor. The execution of the works in slum area is supervised by the sub-division staff, check measures the works completed and prepares the bills and recommends to the Board headquarter for payments of the bills.

It took a long time for declaring the identified slums under the K.S.C. Act section 3 which enables the Board for taking up improvement in the slum areas. The works proposed under EIUS programme in Slum area are not taken up simultaneously as per the guidelines of the programme. Before the Sub-division was formed in 1980 at Hassan, the Municipality has provided the water supply lines and street lighting to all the slums as per the standards wherever it was technically feasible with the Board grants. The actual amount spent on slum Improvement before the formation of sub-division at Hassan is not available.

Planned efforts for environment improvement started only after the sub-division was formed. The survey was conducted in all the slums.

List of works to be taken up was identified and proposed as per the norms. In the Sixth Plan Period in Hassan town works were proposed in three main heads of amenities under EIUS Programme, they are: (a) Sewer Lanes to facilitate easy flow of sewerage flowing out of the dwellings, (b) Formation of storm water drains to drain out the rain water from the residential areas, (c) Formation of Roads and paving the streets.

The actual Judgement of what is to be provided in each slum is proposed by the Engineers incharge.

The Sub-Division has proposed works estimating a cost of Rs. 12.16 lakh in the beginning of Sixth Plan Period. These proposals were based on the urgent requirement of the respective slums, since cost of the works are limited on per capita basis. The works proposed in the Sixth Plan Period was successfully executed in all the Slums and major extent of the amount was incurred in the year 1984-85. The actual cost of the works have gone up to Rs. 15.45 lakh (see Table 2). This has been due to the escalation of costs, constant increase in the contract rates, miscellaneous charges, etc. The per capita average expenditure incurred was Rs. 168 on each slum dweller in Hassan Town Slum, during Sixth Plan Period. This expenditure was not uniform, some slums have consumed higher amount some have consumed very less. This depended on the works proposed by the Engineers of the Sub-division. The highest per capita expenditure incurred was Rs. 240 in the Harijan and Mochi colony during the year 1982-83 and 1984-85. The lowest per capita expenditure incurred was Rs. 35 in Rangoli Halla Slum. This expenditure is confined to formation of road only excluding other amenities. The other amenities are not proposed in this slum. However, the remaining component, *i.e.*, provision of community latrine could not be taken up under the programme in Hassan Slums for lack of land and water facilities.

The amenities provided in the Slum areas have given impetus to the Improvement of environment. So far all the identified slums in Hassan Town are covered under the Environmental Improvement Programme. During the same period Hassan Town faced shortage of protected water supply. This was augmented by new tube wells in the slum areas. These tube wells are funded from the emergency fund of K.S.C. Board. In the entire process preference was given in the following order of priority in the execution of EIUS programme, water supply, street lights, formation of roads, drainage and paving of the streets. The impact of EIUS programme is commendable wherever the amenities are provided. However it faced certain problems, shortfalls in the operation.

Subsequently two more Slums are identified the names of the Slums are: (1) Rajagatta Slums; and (2) Aduvathi Slum. The total population in these two slums are 2153. These two slums are covered under EIUS

TABLE 2 STATEMENT OF EXPENDITURE AND WORKS COMPLETED IN
HASSAN TOWN SLUMS

Sl. No.	Name of the slum	Amount incurred in Rupees	Year	List of works completed against each slum
(1)	(2)	(3)	(4)	(5)
1.	Slum at Silver Jubilee Park Road	91,091.00	1982-83 1984-85	Drains, B.S. Slab Paving.
2.	Chicknalu Slum in Pension Mohalla	3,31,274.00	1985-86	Roads, Drains and B.S. Slab Paving.
3.	Harijan, Mochi Slums in Pension Mohalla	5,54,017.00	1982-83 1984-85	Roads, Drains, B.S. Slab Paving.
4.	Chippanakatte Powra Karmika Slum	1,22,025.00	1983-84	Roads, Drains, B.S. Slab Paving.
5.	Slum behind K.E.B. Colony	1,56,873.00	1984-85	Roads, Drains, B.S. Slab Paving.
6.	Harijan Slum on B.M. Road	98,135.00	1984-85	Roads, Drains, B.S. Slab Paving.
7.	Slum behind District Jail	1,03,637.00	1984-85	Roads, Drains, B.S. Slab Paving.
8.	Slum near H.N. Pura Octroi Gate	65,527.00	1984-85	Roads, Drains, B.S. Slab Paving
9.	Rangoli Halla Slum	23,329.00	1984-85	Roads.

SOURCE : Lr. No. KSCB/AEE6/HSN/87-88/395/dated 03-07-1987.

Programme in the Seventh Plan Period and amount of Rs. 5.25 lakh is allocated for the improvement of the slum areas.

The Impact of EIUS Programme

The EIUS programme has given a new look to the slum. It has brought considerable improvement in the lives of the slum dwellers. The amenities created were comfortable and more useful. These amenities have added cleanliness to the areas, thereby improving the environment.

It has benefited the dweller personally, his surroundings are improved to provide him a better environment to live in, which otherwise would have not been possible for him. By improving the living conditions, the programme would be preventing health hazards, preventing contagious diseases, avoiding darkness in the nights, avoiding water logging which breeds mosquitos. These amenities have also facilitated free movement of vehicles and the scope of the pollutants is reduced. Thereby reducing the agents which are causing damages to the environment. The programme acts as preventive and curative measures for health hazards. The stink and bad breath is controlled by paving the lanes.

The investments made in the EIUS programme have created permanent immovable assets in respective slum areas. These assets shall be directly benefiting the dwellers and indirectly contributing to the overall environmental improvement of the town. Through this programme the worst sufferers of the polluted environment are rescued. The IDSMT programme in Hassan together with the EIUS programme have created a better environment for development of the town.

However certain limiting factors have come in the way of the execution of programme. All the amenities are not provided at a time, even if they are planned it is not financially feasible as per the prescribed norms. Cost escalations have affected the quality of works taken up under the programme. The contract rates have steadily gone up from 1980 to 1985. Only the external environment of shelter is improved, internally it remained as it were, this is also causing health hazards. Absence of proper data on existing slums with continuous increase in slum population the EIUS could not be properly planned.

The implementing agency has faced certain problems while executing the EIUS programme. Political interference, vested interests are coming in the way of EIUS works, the bureaucracy lacks the direction from the political executives. The civic amenities are already over burdened and they are unable to be extended to the slum areas. Non-cooperation from the slum dwellers, financial constraints, non-available of land for community latrines, centralised decision at the Board level are some of the constraints faced in execution of the programme. The slum dwellers steel the material pooled by the contractor, no contractor is coming

forward to take up works in slum areas. The accounts division is located at Bangalore, payment of the bills are delayed. This is leading to delay in execution of works.

Conveyance facility is not provided for the board staff to cover three districts which form the jurisdiction of the Hassan sub-division. It is greater drawback to supervise works in progress simultaneously in all slums and in all the towns, due to this disadvantages the work quality has been suffering. Yet another major problem is due to improper layout in the slums sewer lines and drains are not properly planned.

CONCLUSION

Today in India eradication of slums is not emphasised. So the environmental improvement is the next best alternative available. Improvement of environment cannot be done by the individual alone, nor by the poor slum community. It is the obligation of the state to manage the environment. Good hygienic conditions in the living areas are ensured through the Constitution of India under the directive principles. The slums are formed inevitably and they remained in bad environment with the helplessness.

The EIUS programme has largely benefited the weaker section of the society, especially the scheduled caste and scheduled tribe in the slum areas as envisaged in the plan. The EIUS programme is acting as a catalyst for the overall development of the towns. In absence of this programme the poor people would continuously suffer in the unhygienic conditions from birth to death.

The EIUS is an physical improvement programme. However, the EIUS programme alone would not bring tangible change in the environment. Dwellers are the architects of slum areas, any change in these areas should be brought through their involvement. Neighbourhood belongingness should be developed among the residents proper education should be imparted to the dwellers.

The dwellers should be motivated, educated to make them aware to improve their own localities. Community based movement alone can preserve the natural environment in the surroundings. The dwellers should be involved at all the stages of the EIUS programme for successful execution and long lasting impact of the programme. With the cooperation of the slum dwellers the KSC Board can yield much more better results. Unless this is done whatever is provided through the plan the dwellers are not satisfied. We should help them to come out of their helplessness and improve them to integrate with the rest of the society.

Presently the Municipal Council is not involved in the implementation of EIUS programme, KSC Board alone is managing the

programme. The Council should be involved in the programme, and seek the cooperation of its elected representatives. After completing the EIUS programme the improved slums should be handed over to the municipality for maintenance. Due to delay in handing over the improved slums conservancy, waste disposal and extension of public health measures are absent today. With the absence of the maintenance the assets created under the programme are further creating problem in the slum rather than facilitating for environmental improvement.

The EIUS envisages coverage of the population with per capita expenditure. It does not envisage the qualitative works and physical coverage of the entire slum. However the intention of the EIUS is to cover the entire slum population infrastructure whatever could be created in the allotted amount has been provided under the Programme. This limitation has made EIUS programme to cover partial development of the slum. To cover the entire slum another plan has to be made. The standards set in the EIUS works are low, contractors are not able to take up quality works with low budget scale.

The IDSMT programme in Hassan has increased the scope of development of the town and this may result in the formation of few more slums. The EIUS programme should be an ongoing programme to take all the newly identified slums.

The KSC Board should seek the help from all other sister agencies involved in urban development such as Town Planning, Housing, Municipal Administration, Karnataka Water Supply and Drainage Board, Pollution Control Department, in executing the slum improvement programme comprehensively.

So far, efforts were made only to review the work progress to achieve the target, the evaluation programme has not been made to study the actual impact of the EIUS programme. The satisfaction of the slum dwellers alone should be the primary target rather than coverage basis in improving the slum areas. However, providing physical amenities in the slum is not the final task to improve, the environment should be scientifically analysed and tackled effectively.

Absence of a long-term strategy for slum improvements in the state, inadequate budgetary resources, delay in declaring the slums, inter-department coordination problems and the maintenance of improved slums are identified as the major problem areas in the EIUS programme. The physical alignment of the houses in the slum areas are not at all changed by the programme which is a prerequisite for planned living that creates better environment.

The sanitation is very poor even after the development of slums under the EIUS programme. The low cost sanitation programme is a must for every slum area and a fundamental prerequisite for improving the existing urban environment in slum areas. As long as the root cause of slums

is not tackled completely slums emerge and spoils the urban environment.

SUGGESTIONS

1. Effective Measures should be taken to check the formation of new slums.
2. The importance of environmental awareness should be created in the urban centres.
3. The residents should be asked to share a part of the expenditure of the improvement works to create a sense of belongingness.
4. New source of finance should be found to expand the programme on a large scale.
5. There is need for motivation and people's participation for the successful and long lasting impact of the programme.
6. Local body should also earmark a percentage of budget to improve environment in the town.
7. The hardware provided in the EIUS programme should be supplemented to the software, especially train the dwellers to utilise the asset properly and maintain them properly.
8. The municipality has to take over the improved slums and maintain the assets directly and extend all the conservancy services such as sweeping and disposal of waste, etc., that alone shall provide a better environment to live in.
9. Low cost sanitation should be taken up on priority basis, it can reduce the pollutants in the slum and helps the environmental improvement in many ways.
10. The KSC sub-division staff should be strengthened and necessary authority should be delegated to manage programme effectively.
11. The environment should be scientifically studied for providing permanent remedies.
12. Planting suitable trees in and around the slum areas should be encouraged.
13. Urban Community Development Hyderabad Model which is known for the people's participation should be adopted in delivering the basic services to the slum to improve the environment.
14. The Urban Basic Service Programme introduced in the Seventh Plan envisaging the convergence of services for comprehensive slum development should be extended to all the urban centres.
15. Effective poverty alleviation programmes alone can enable the poor slum dweller to take care of their dwellings and its surroundings.

Book Reviews

Planning the Indian City, MAHESH N. BUCH, Delhi, Vikas Publishing House, pp. 176, Rs. 150.00.

The book reflects the quest of an administrator who was thrown by destiny into the realm of urban planning and management. As the author acclaims with modesty "in the process he gained experience and at least knowledge of the professional jargon".

The pace at which cities and urban life itself have grown is unprecedented and breathtaking by any standards and this is true not only if we look at urbanisation as just patterns of human settlement but even when we go on to view it as a way of life. When one is in quest of the 'city beautiful' one finds one is face to face with an idea that has many mansions. There cannot be beauty without convenience and even the grandest of edifices and the most beautiful plan will fail if the citizen's comfort and basic facilities have been ignored.

The author in search of a process to produce such a 'city beautiful' starts with "the logic of planning" and comes to the conclusion that "unless the city's linkages with its hinterland and the extra-regional areas which donate migrants to it are clearly appreciated, there can be no meaningful city planning in this country." Thus he goes on to explore "the regional variations in urbanisation" to support the same central idea of urban planners evolving regional planning strategies and breaking away from the narrow confines of urban areas and more boldly on to a wider canvas of regional setting. Thus the planning shifts from the realm of city planning into that of economic planning but he admits that the physical planning input would continue to be important because it is necessary to create the infrastructure which would permit industries to develop.

The chapter on "the regional services" describes the well-known scenario of inadequate water supply coupled with its equally blackened reverse face, namely, the collection, carriage, treatment and ultimate disposal of sillage, sewage and garbage, differentiated and inequitable distribution of power and social infrastructure between urban centres and even their immediate neighbourhoods and finally the author once again zeroes on his main theme of the success or failure of a city plan in the Indian context revolving round the measures one takes to

develop the regional system of economic relationship to the mutual benefit of both town and country. Right through the initial build up and subsequent chapters on "Location and the Environment of Impact of Cities" as well as the "Use of Land, its Planning and Management", the book is simmering with dissatisfaction towards the type of land use planning done specially in Delhi which according to the author has neither channelised growth, nor diverted population away from Delhi—nor had any effect whatsoever on the type of growth that occurred in the metropolitan region. Having occupied key administrative positions in Delhi, specially connected with the Development of the Capital—the author one thinks should know what he is saying although the planners might turn back and say what was he doing there sitting at the top. The criticism of planners specially physical planners for the work done by them more than two and a half decades ago and then suggesting regional planning as an earth-shaking discovery does not do any justice to the planners. In fact almost all the Chief Town Planners who have headed the Central Government's Town and Country Planning Organization from Charu Gupte to Chandrashekhra, Sayed Shafi and Edgar Ribero have been talking themselves hoarse about Regional and Metropolitan Planning and in fact twenty years ago they pursued the issue of setting up of URIS—Urban Regional Information System—so essential for regional planning, but the administrators managed to kill the idea with their shrewd move by sanctioning such paltry amounts in the budgets with which one could not buy even a decent electronic typewriter leave aside a series of computers needed for storing and retrieval of the information so painstakingly gathered from different regions. In all fairness to the planners they had envisaged the idea of the National Capital Region (NCR) and its synchronising planning with Delhi as far back as 1960; eventually however, the NCR Planning and Development board was enacted by the Parliament as Act 1 of 1985 after a lapse of a quarter century. The author's analysis: "Unless we are able to do the necessary ground work in creating a new breed of planners, we are likely to be faced with a massive aggravation of the present problem of unrealistic land use planning in which what is produced in paper has no bearing whatsoever on what exists on the ground. The planner's city in India is only a fantasy, a cloud cuckoo land of what can never be". There are many in this game of urban planning who feel that the observation supplies more to those administrators entrusted with implementation of plans. The planning of city is far too complex and sensitive to be left more or less entirely in the hands of administrators turned planners.

The chapter on shelter makes one feel as if one has wandered into interesting lanes and by-lanes of the main topic. Although the author mentions about the total number of 1.3 million dwelling units funded

by HUDCO by the end of financial year 1983-84, he avoids to mention that by that time HUDCO had increased its output from a meagre 20,000 dwelling units a year to one-third of a million dwelling unit per year by 1983-84. His description of HUDCO: "Computer assisted designs" of city planning also betrays lack of understanding the highly sophisticated computer programme developed by HUDCO's researchers in collaboration with Harvard and Massachusetts institute of Technology. According to author what "ultimately emerged is a reduction in public areas, including streets, to a level where colony becomes a soulless, mechanical layout of narrow streets and tiny plots, in which masses of people are condemned to live in extreme discomfort for generations to come". Had the author gone through the technical papers published on the subject he would have known that the public areas, street widths, plot sizes and even the specifications for services were the inputs in the computer designed programme which would then print out the most efficient and economical layout of the predetermined type and design of a module. A planner could choose from a host of alternate modules available and if required he could make necessary changes to fit the situation. By no means it is a substitute for the design ingenuity.

"the city aesthetics"—the last chapter is a cry of anguish when an administrator-planner fails to find adequate solutions to the problems otherwise so lucidly narrated. The author then turns to art and culture through which "a great planner can raise a city from the daily humdrum and struggle for life to a high plateau in which as the author puts it—urban becomes urbane". The real answers, the solutions remain elusive. How should a great city turn to advantage the migration of rural dwellers into its precincts by orderly and planned absorption although it will still look for the larger metropolitan and regional planning processes to ensure its restriction to the minimum? How the planners, the politicians, the administrators and the citizens will like to ensure that the environment is preserved? How will the relocation of dwellings or industry take place in an ordered fashion? And when the city expands, it should expand in a manner so that it should not shock its residents and neighbouring areas but rather surprise them pleasantly with its graceful and artistic growth, its sprawling gardens, its places of recreation, its theatres or play grounds and fill them with joy. The need is always for a greater dreamer and a relentless will to pursue a plan imaginatively outlined. Whatever be the circumstances, nothing can be achieved without the citizen's active participation in all processes of planning and execution.

May be answers to these questions will be provided by the author in the final report of the National Commission on Urbanization of which he is the Deputy Chairman. But how one wishes that the author had also dealt with the doubts which the planners express from time to time

of the administrators failing them in delivering the goods, of having no commitment to professional integrity but only dexterity in dealing with those in power—of 'plotting'—i.e., allotting plots to VIPs or people who matter and of the dubious deals of power with press-barons who can boost their image. In such a game of chess—where destiny mates and checks and slays, some have reached the zenith and others had to quit in prime. In the process it is the city that suffers and the price is paid by the town in terms of beauty comeliness.

The book is persuasively written and will be of interest to both generalists and professionals and the loud thinking is certainly worth the price which is reasonable.

—H.U. BILANI

Community Power: Directions for Future Research, ROBERT J. WASTE, (ed.), Beverly Hills, Sage Publications, 1986, pp. 207, \$ 27.50 (Hardback).

This book, as the editor says, evolved as a direct result of a theme panel organised by Professor Susan A. Mac Manus (Cleveland State University) for the 1984 Annual Meeting of the American Political Science Association. It is divided into four parts. Part I contains the Introduction, and Part IV contains the Conclusion. Part II and Part III contain three essays each. Part I presents a summary of local government research in the United States over three decades. Part II presents the elite view of community power; whereas Part III presents the pluralist view of community power. Part IV is an attempt to set forth the future directions in community power research.

The debate over community power is on since Floyd Hunter's work on *Community Power Structure* appeared. The three camps which have joined in this debate represent the three different approaches: Floyd Hunter's reputational approach (1953), C. Wright Mills' positional approach (1958), and Robert A. Dahl's decisional approach (1961).

Since Floyd Hunter's community power structure a fresh note has been introduced in social science about the analysis of power at the community level. As the debate developed two divergent views came up in the field of analysis of community power, characterised by an elitist view comprising reputational and positional approaches, and the pluralist view comprising the decisional approach. For Hunter, the main task of studying power in local communities consisted in identifying the principal leaders at the local level—the 'power brokers'. Mills, alongwith Domhoff and Dye, shares the assumption that the political power in most communities is exercised by a relatively small group of people, as Mills in his "The Power Elite" advanced the notion that the ruling class

comprising the leaders of economic, social and military groups controls the national Policy process on all key issues of importance in the United States of America.

Dahl, alongwith Polsby and Wolfinger stressed the decision-making functions as important to community power structure. Dahl emphasised the decision-making function of the leaders in New Haven. He found that individuals who were influential in one sector of public activity tended not to be influential in another sector.

The three major approaches to the study of community power, *viz.*, the reputational approach developed by Hunter, the positional approach of Mills, and decisional approach associated with Dahl, drew a dividing line between these social scientists.

The present volume focuses on this debate which took a new shape since the 1984 Annual Meeting of the American Political Science Association.

The elitist view of community power is represented through the essays written by Thomas R. Dye, G. William Domhoff, and Clarence N. Stone which constitute part two of this book; the pluralist side is represented through the papers of Robert J. Waste, Heinz Eulau, and Robert A. Dahl which form part three of the book.

These seemingly divergent views expressing disagreement, among these two groups of social scientists have the underpinning of agreement on at least one point, *i.e.*, an agreement about the shape and directions of urban research in the future. Robert J. Waste in the beginning of the book elaborates old antagonisms and new directions in the analysis of the community power; and concludes in part four about the directions of community power research in the future, by saying that "Community power research is inseparable from the larger realms of democratic theory and comparative government".

The essays included in this volume tend to remould question of theory and method while attempting to establish links between the study of community power and broader study of local government and general public policy. Thomas R. Dye attempts to link in Chapter II community power and public policy. Domhoff in Chapter III elaborates a "Growth Machine" theory of local decision-making for elite analysis. Both Clarence Stone in Chapter IV and Robert J. Waste in Chapter V attempt to explain the terms 'power' and 'pluralism' in the community power debate. Heinz Eulau in Chapter VI shows the usefulness of applying network analysis to community power studies. Robert A. Dahl in Chapter VII reflects on his original New Haven Study and speculates on directions for future research in community power, and the study of local Government. Again, Robert J. Waste in Chapter VIII which forms Part IV almost prepares agenda for urban studies and community power research of the future by weaving together all the earlier essays in the

book. Waste pleads for a willingness on the part of the elitists and pluralist to join together to develop precise vocabulary and field methodology for community power studies which may prove to be useful to understanding the relations between leaders and citizens in democratic politics.

The study of power and politics in local communities is an important area of research all over, especially, in the newly emerging democratic nations of the world; but the use of the concepts as developed by these scholars in these essays remains open to question. Their utility will depend upon their suitability and applicability to the study of power structure in local communities in various nations. However, this book is a valuable addition to the field of community power researches in social science.

—R.N. THAKUR

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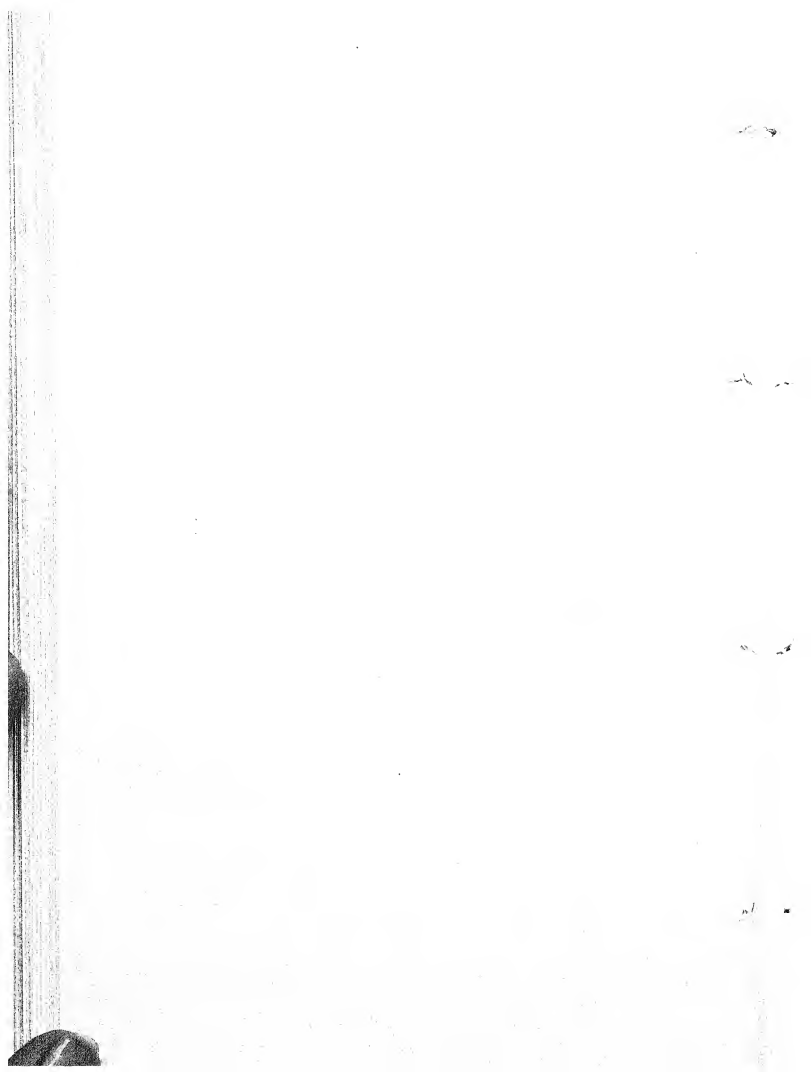
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Urban Planning and Implementation: Some Issues

V. GNANESHWAR

“**P**LANNING REQUIRES vision, imagination and an ability to group the relationships between different elements of urban fabric. Implementation requires hard-nosed bureaucratic skills, an ability to design and implement controls, to negotiate with government departments and authorities and to cajole businessmen.”

Urban India has to suffer on both the fronts—planning and implementation. Urban Planning is riddled with inconsistent policy approaches, rural-urban dichotomy, ineffective local government system and borrowed western planning concepts. The fragmented administrative system in urban areas along with a host of urban laws and statutes have transformed the urban areas into a functioning jungle. Planners and administrators have become virtually passive observers witnessing the steadily degenerating urban system. The explosion of knowledge in modern times has facilitated the urban planners in devising new and impressive planning concepts and programmes. But the implementation has to lag far behind due to a number of inherent weaknesses existing in the urban system.

The dynamics of urban planning and implementation are analyzed in this paper. The problems relating to administrative fragmentation, fiscal constraints and urban politics are discussed.

URBAN PLANNING AND IMPLEMENTATION—MISSING LINKS

Traditionally, planning and implementation have been conceived as separate activities, and are entrusted to different administrative units with very vague and weak linkages.

The separation of plan formulation and implementation has rendered many plans to be mere statements of intent covering ambiguous objectives without engaging in specific implementation strategy that may

¹Max Neutze, “Urban Planning, Policy and Management”, *Australian Journal of Public Administration*, Vol. XLI, No. 2, June 1982, Sydney, p. 146.

provide necessary investment guidelines and possible contingency measures for any unforeseen implementation problems. Failure to provide adequate interaction within the planning process among the constituencies of the government has created a huge gap in development.²

Translating national development plans into operational programmes and investment projects has become one of the most critical and difficult tasks facing planners and administrators in developing countries for without properly implemented projects, development plans become only empty objectives remaining forever elusive.³ For instance, though balanced growth has been repeatedly emphasized by the successive national plans, no significant achievement is made in dispersing the industries from urban/metro centres to backward rural areas. The rural development projects could not have the desired effect on balanced development as the investments made are inadequate to match and sustain the growth. Further, the rural development projects could largely benefit privileged rural sector who in turn preferred to invest their surpluses in urban areas rather than in rural areas.

Urban and rural areas have been treated as separate entities for planning purposes in the earlier planning efforts. It is only in the Sixth Five-Year Plan that some tangible effort was made to treat urban and rural areas as interdependent for their sustenance and growth. The Integrated Development of Small and Medium Towns scheme launched by the Government of India during the Sixth Plan is an outstanding example in this respect.

The urban planning itself was confined to physical growth of urban areas till recently. The numerable town planning and master planning efforts made so far in India deal mostly with land use control and building regulations. The other facets of an urban system like settlement pattern, economic structure and rural-urban interactions are being discussed widely in recent years only and the feasible concrete steps to integrate the rural and urban streams of development are yet to be worked-out.

Urban planning is traditionally considered as technical function and is entrusted to agencies like the city improvement trust, development authorities and the directorates of town planning. But the implementation is left to the very inadequately equipped civic bodies. However, city corporations undertake both planning and implementation tasks in their respective municipal areas. Apart from this, a host of central and state level organisations prepare sectoral plans and implement them through their field agencies in an isolated manner.

²Louis J. Goodman and Ralph N. Love, *Project Planning and Management—An Integrated Approach*, New York, Pergamon Press, 1980, p. 5.

³*Ibid.*, p. 7.

Over and above these policy constraints, urban planning and implementation functions suffer from lacunae existing in the statutory, administrative, financial and political spheres of an urban system.

Statutory Perspective

Legal fabric stipulates the pace of implementation process. Hence, the implementation of urban plans depends, to a large extent, on the laws governing various urban functions. The everchanging urban scene has made the traditional town planning concepts and the related statutes obsolete necessitating a thorough reform. The states like Tamil Nadu and Maharashtra have already made considerable efforts in this area. The state of Maharashtra has an advantage of having earlier Town Planning Acts in India. Though town planning Acts were in vogue even in the early part of the present century, they were restricted to physical aspects like land-use control, lay-out sanctions, zoning, etc. The broader issues like employment, industrial growth, migration and settlement patterns, etc., were left out. Further, the jurisdiction of a town plan was limited to cities and towns, excluding the hinterlands. Thus, the Town Planning Acts lacked comprehensiveness as well as integrated perspective.

As a step towards integration, certain states have enacted regional planning legislations. For instance, the state of Maharashtra has enacted the Maharashtra Regional and Town Planning Act, 1966. This Act provides that the local bodies including the Zila Parishads are responsible for planning⁴ and implementation⁵ in their respective jurisdictions. Further, the provision of Special Planning Authority⁶ is made for developing new towns. In regard to metropolitan regions, the constitution of Regional Planning Boards⁷ is provided. But these Boards are made responsible for planning only. From content angle, the Act dealt in considerable depth. Many aspects like population distribution, land-use, greenery, environment, water supply, transport and communication, etc., are included in town planning and transformed the term town planning into development planning.

This apart, a number of legislations like the Land Acquisition Act, Urban Land (Ceiling and Regulation) Act, City Corporations and Municipalities Acts, Panchayat Samitis and Zila Parishads Acts, etc., govern various organisations engaged in urban development process. A number of other state and central agencies are administered by different statutes. Simultaneous operation of these laws, with their specific objectives, by-laws, rules and regulations has created a complex urban situation. Some

⁴Maharashtra Regional and Town Planning Act, 1966, Section 21.

⁵*Ibid.*, Section 42.

⁶*Ibid.*, Section 40.

⁷*Ibid.*, Section 4, (1).

of the laws like the Urban Land (Ceiling and Regulation) Act and the Land Acquisition Act have overlapping functions. Further, it is observed that the Rent Control Acts have adversely affected the municipal revenues.

The diversified legal frame is found to be a major hurdle for smooth operation of the interdependent urban planning and implementation functions. Many a time they had either restrictive or overlapping influences. Hence, an analysis of the effects of operation of these laws on one another requires utmost attention.

Administrative Perspective

Administrative fragmentation is the outcome of specialisation which is the by-product of urbanisation. The existence of numerable public agencies, either special purpose or local bodies belonging to different levels of government having substantial autonomy is a common phenomenon one comes across in the metropolitan regions world over.

Multiplication of administrative organisation in a metropolitan region provides ample opportunity for frictions in programme and project formulation as well as in their execution. Even if comprehensive and integrated regional planning is conducted, there will be scope for overlapping and conflicts under the present system of administrative fragmentation, which is in-built in the democratic functioning of modern governments and the rapidly increasing trend of specialisation in every department of life. The rationalisation of developmental functions at the local and metropolitan levels can reduce the duplication to some extent. But, complete demarcation cannot be expected from a dynamic urban environment. Hence, there should be a high level statutory body to promote better relations among various administrative units.

In regard to actual implementation, there should be flexible attitude on the part of various administrative bodies towards other units. Usually, conflicts arise due to rigid attitudes developed over a period by officials. Effective communication and information system can reduce the scope for conflicts. In the execution sphere, for instance, a municipality or municipal corporation has to deal with various state and central government bodies in order to obtain their services. The rigid outlook which exists especially in the traditional administrative units like the revenue administration and certain autonomous agencies hampers the progress of execution due to unnecessary formalities, rules and regulations. In this regard, a regional organisation to act as mediator and resolve the conflicting situations through wider contacts and higher status would be advantageous for fostering integrated development.

Financial Perspective

Fiscal planning is vital link between development planning and imple-

mentation. The financial structure is so framed in India that each lower level government has to depend upon the higher level government. For instance, the local government units in urban areas have only the property tax which forms bulk of the local finance and octroi in some states like Maharashtra. Hence, these local bodies have to depend upon the state and central governments for grants and loans in order to carryout their development activities. This implies that urban local bodies cannot implement their plans and programmes without financial assistance from higher level governments. The inference is that financial dependence of local bodies upon the higher level governments makes their position weak and provides opportunities for the interplay of politics. Each local body fights for more funds and the state governments find themselves in embarrassing position in providing grants and loans in a competitive situation. All this creates a tense environment among different levels of government and antagonistic attitude towards other local bodies within a single metropolitan region. Thus, unsound financial position of local bodies gives rise to complicated problems which are popularly termed as politics of scarcity.

Financing of urban development has been fragmented in India. Firstly, the central and state plans have very restricted view of urban development, mostly referring to urban planning, urban sanitation, slum improvement, public health, etc. Whatever provisions are made under the urban development caption are meant for these areas only. Urban water supply, housing, industrial growth, urban transport and communication and such other aspects are financed through a number of autonomous and semi-autonomous agencies. Practically, no financial discipline is found in the urban/metropolitan development. Even the recently mounted integrated urban development and integrated rural development projects lack the comprehension and effective linkage. The vital subjects like slum improvement, industrial growth, employment generation and housing, are still financed independently. Hence, there is need for a common platform to discuss and channelise various investments in a particular urban/metropolitan region.

Political Perspective

In a democracy, political leaders play important role in planning as well as implementation. The politicians have to formulate certain socio-economic objectives and on the basis of them formulate comprehensive development policies which in turn guide various plans and their implementation. Urban development is not an exception in this regard. The planners and administrators are not in a position to perceive the socio-economic realities in metropolitan areas. Pre-conceived ideas like democratic socialism, gainful employment, welfare society, and controversies like rural development *vs.* urban development, dominate the political

activity, making the politician insensitive to the hard realities of an urban system. This has widened the gap between politicians and the administrators. The former engaged in their ideological exercises oriented towards cheap publicity while the administrators being responsible for implementation facing contradictory situations.

Metropolitan regions provide ample scope for interactions among the three levels of politicians—central, state and local. The MPs, MLAs, municipal councillors and panchayat members have due shares in the entire urban development process. Each sector has claims and counter-claims either for more powers or more resources.

A regional coordinating body as a platform to deliberate upon common and interrelated issues is necessary in this respect. It has to be chaired by the Minister concerned for Urban Development and must be made responsible to channelise the political endeavours for successful implementation of the development schemes and projects.

CONCLUSIONS

Urban development is a complex phenomenon requiring rational thinking and concerted efforts to cope with. The traditional separation of planning and implementation functions is not conducive for integrated urban development. Hence, the need for treating urban development planning and implementation as continuum. The urban development authorities constituted in various parts of the country can play catalytic role in bringing such continuity.

The aspect as to whether the metropolitan or urban development authorities should execute the development projects and schemes on a large scale is a secondary factor, depending, to a large extent, upon the politico-administrative environment of the region concerned. However, the urban development authorities may have to undertake execution in certain areas where there are no proper and efficient organisations to undertake such tasks.

In order to achieve integrated urban development, the linking of planning and implementation processes must be institutionalized. The following steps are necessary to realize this:

1. Setting-up of a regional urban development authority with adequate powers and political status to deliberate upon and to take vital decisions affecting the developments in the region concerned.
2. Engaging in a network of planning processes—regional planning, land-use planning, sectoral planning, area planning, etc., in an interrelated manner.
3. Transforming these plans into executable and time-bound development projects.

4. Mobilising the finances and investing on a regional perspective.
5. Developing an extensive data-bank and information system on urban related issues.
6. Establishing communication channels and formal linkages among various implementing agencies in the urban region concerned.



Housing in India: Problems and Policies

N. ASHOK KUMAR
and
V. LAKSHMIPATHY

ONE OF the serious consequences of urbanisation is unbridled shortages in housing.¹ The problem of housing is not confined to India alone and is known to be rampant even in developed countries, such as the USA, the UK, West Germany, Portugal, France, Canada, etc. All such countries cited above have gone through serious housing crisis during pre and post-World Wars I and II. As early as 1834 the USA had experienced enormous housing shortage which led to the founding of the "Association for improving the conditions of the poor" in 1847. It is said that Germany, by the year 1966-67, carried a deficit of 2 million housing units. Portugal's housing crisis as estimated by an ILO Committee, requires atleast 43 years for satisfactory solution and at best 90 years if renovation of all the old housing units is taken into consideration. It is observed that on the large scale destruction during the World Wars I and II could be attributed as the main reason for housing crisis in the West and East. Apart from the dramatic reasons such as wars, crisis in housing may be due to the following reasons:

1. uncontrolled growth of population;
2. desire to consume more number of housing units than really required;
3. monopolisation of housing construction by a few economically well-to-do; and
4. additions of new units to the existing housing stock is much less to the expected demand and need, *i.e.*, construction of new housing units is not in tune with the growing requirements.

¹Housing or shelter in a developing country like India has a different connotation from that of the developed countries. For more details see S.P. Arya, "Housing Tomorrow's Millions", *The Statesman*, August 12, 1986, p. 12.

Different countries have adopted different methods and formulated various policies to, meet the shortage of housing. Universally, all the countries apart from taking construction activity on its own also encouraged private, corporate sector, cooperative sector and household sector through the introduction of various incentives in the form of tax reliefs, provision of subsidies, loans, and grants to those aspirants who would like to construct housing units on their own. In order to protect renters from excessive rent increases and undue exploitation by home owners particularly when there is a heavy demand and less supply of housing units, many countries including India have introduced Rent Control Act but in reality it gave way to negative results in addition to a little positive effects. India on its part took initiative in the field of housing allocating a separate budget for housing development right from the first Five Year Plan. Yet, the principle of housing as a basic right of man is not achieved in all cases and has remained a major question to the government in particular, administrators, politicians, social and urban planners in general. Housing crisis for a section of people is because of lapses in the National housing policies² and for others, it is due to failure of the private sector in producing the housing in bulk to meet those who are in real need, except doing for profit.³ Hence, housing has become the concern not only for the individuals or groups but even for the nations at large. Hence, the UNO General Assembly in order to awake the nations for this human problem declared the year 1987 as International Year of Shelter for the Homeless.

The Background

The concept of 'housing' occupies a very important place among the requirements of civilised living, next to food and clothing. Literally 'house' connotes a physical structure to provide shelter, including the necessary social infrastructure. Viewed from a commercial angle, it is an economic good which can be traded apart from being a form of investment. It is also considered a symbol of social status and the degree of status varies in accordance with the type of dwelling and its location. For example, the inhabitants of big mansions or buildings in posh localities are considered as rich compared to others who live in moderate houses in medium localities or small dwellings in congested and unclean localities. The last category of people carry the stigma of 'poor'. The wide disparity in the housing patterns—especially when it is one of the basic human needs, is a sad reflection of unequal distribution of wealth

²Smith in his study noted that one of the sources of housing crisis is public policies. For more details see L.B. Smith, *Anatomy of a Crisis: Canadian Housing Policy in Seventies*, Vancouver, Fraser Institute, 1977.

³D. Harrey, "Labour, Capital and Class Struggle Around the Built Environment in Advanced Capitalist Societies", *Politics and Society*, 6, 1977, pp. 265-95.

in the society. An attempt is made in this article to examine the aspect of housing in India, along with the reasons for the crisis in the light of similar studies in the developed countries. The contingent aspects such as sources of housing finance, roles of the government and private sector in the promotion of housing sector are also analysed.

Urbanisation

The state as well as pace of urbanisation not only varies from one country to the other but even within the same country. While over 39 per cent of World population is categorised as urban⁴, the percentage in developed countries amounts to 69 and 29 in the developing countries. Urbanisation in India has rather been slow at an annual rate of 0.35 per cent only during 1971-81 as against the universal average 0.63 per cent.⁵ The total urban population in India as per 1981 census was 159.73 millions which is less than one-fourth of total population. But the reason for alarm lies in the fact that the entire urban population is unevenly spread out among 3,245 towns and cities of which 216 belong to class I category shouldering nearly 60.4 per cent of the total urban population. The decadal growth of urban population as well as its distribution are represented in Tables 1 and 2.

TABLE 1 GROWTH OF POPULATION—1951-1981

Year	Population (In Millions)			Percentage of Urban Population to total Population
	Urban	Rural	Total	
1951	62.4	298.5	360.9	17.30
1961	79.1	360.1	439.2	18.00
1971	108.9	438.3	547.2	19.70
1981	159.7	525.5	685.2	23.30
2001	315.4	684.6	1000.0	30 to 40
(Expected)				

SOURCE: *Census of India*.

It can be seen that class I and II towns and cities shared the largest population while the share of population in class V is only notional. The class VI settlements are in no position to attract urban population and are on the verge of denotification from the urban map. However, it is expected that by 2001 AD the total population of the country would

⁴Arun Kumar Sharma, "Urbanisation Patterns in the World: Their Implications for India", *Journal of Social and Economic Studies*, Vol. X, Part I and II, 1982.

⁵M.K. Jain, "Growth of Cities and Urban Agglomeration in India 1971-81, A Census Analysis", Paper presented at the S.V.U. Conference, 1982.

TABLE 2 DISTRIBUTION OF URBAN POPULATION IN THE TOWNS AND CITIES OF VARIOUS CLASSES

Class of the Town	Number of Towns		Population in (Millions)	Percentage of Population to Total Urban Population	
	1971	1981		1971	1981
I	145	216	94.34	56.2	60.4
II	178	270	18.12	11.2	11.6
III	570	739	22.50	16.3	14.4
IV	847	1048	14.84	11.2	9.5
V	641	742	5.62	4.6	3.6
VI	150	230	0.78	0.5	0.5
TOTAL	2531	3245	156.20 Latest: 159.0	100.0	100.0

SOURCE: Seventh Five Year Plan—1985-90.

be around 1,000 millions, of which about 315 millions (30-40%) would be urbanites with commensurate increase in number of towns and cities. Problems like increasing population densities along with pockets of comparative ease, high levels of unemployment along with shortages in trained personnel, ever increasing number of slums along with growing number of large and spacious housing colonies increasingly heavy investments promoting urban infrastructure along with poor sanitation, shortages in water supply, poor state of roads, transportation and street lighting, are some of the bewildering consequences of such unmitigated urbanisation. Though each of the paradox deserves fullest attention, the problem of housing is taken up for analysis in this paper in the background of the UN declaration of 1987 as the International Year of Shelter for the Homeless. Provision of housing of the magnitude to meet the diverse demands is not an easy task because it is rather doubtful whether the entire population can ever be taken into consideration by the census while estimating the housing shortage in the country. The status of housing viewed from the perspective of the alarming shortage brings out the question as to who should shoulder the responsibility of providing adequate housing to the teeming millions.

URBAN HOUSING IN INDIA

The state of access to housing symbolises a nation's level of economic development and well being—both social, as well as cultural. In comparison with such an ideal the state of art in respect of housing in the country is abysmally poor. Choking, congestion, substandard quality

and old in appearance are more prominent everywhere. For instance, in metropolitan cities, the average number of persons per room is 3.99 (Bombay), 3.4 (Calcutta), 3.0 (Delhi) as against the country's average number of persons per household (5.6) and 2.8 per room.⁶ The size profile of housing in major Indian cities is represented in Table 3.

TABLE 3 PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY SIZE OF DWELLING UNITS OCCUPIED IN INDIAN MAJOR CITIES—1971.

City	Percentage of Households in						Total
	One room unit	Two room units	Three room units	Four room units	Five room units	Unspecified number of rooms	
Calcutta	67.6	17.2	8.1	3.7	3.3	0.1	100.00
Kanpur	59.6	27.0	7.1	3.3	3.0	—	100.00
Bombay	77.4	14.2	5.3	1.9	1.1	0.1	100.00
Delhi	57.1	25.7	9.5	4.3	3.1	0.3	100.00
Poona	65.1	20.9	7.3	3.6	3.0	0.1	100.00
Madras	53.6	24.4	11.0	5.2	5.5	0.3	100.00
Hyderabad	44.9	28.9	12.8	7.2	6.2	—	100.00
Bangalore	45.4	27.5	11.9	7.4	7.8	—	100.00
Ahmedabad	57.5	27.5	7.8	3.9	3.2	0.1	100.00

SOURCE: (i) *Census of India 1971*, part IV B Housing Tables.
(ii) National Buildings Organisation.

The comparative profile of housing situation in India alongwith a few other countries clearly brings out the state of art of housing in respect of congestion (See Table 4).

TABLE 4 HOUSING CONDITIONS IN A FEW SELECTED COUNTRIES

Country	Year	Average number of persons per household	Average number of persons per room
India	1971	5.6	2.8
Canada	1976	3.2	0.6
United States	1977	2.9	0.56 (1971)
Australia	1976	3.1	0.6
Japan	1978	3.5	N.A.
France	1975	2.9	N.A.
Sweden	1975	2.4	0.6
New Zealand	1976	3.2	0.6
Egypt	1976	5.2	1.8

SOURCE: *UN Statistical Year Book*, 1976-1981.

⁶*Census of India*, 1971 and National Buildings Organisation.

It can be seen that the average number of persons per room in some of the major cities in India is more or less equivalent to the average number of persons per household in some of the developed countries included in the sample. Further, in all the metropolitan cities (except Hyderabad and Bangalore) more than 50 per cent of households live in one room unit and less than 8 per cent live in dwellings of more than four rooms (see Table 3).

With regard to sanitation, environment and availability of basic amenities in the Indian context, only 56 per cent of urban population have access to community water supply (39 per cent by house connection and 17 per cent by public stand post), while 6 per cent inhabitants in rural areas do have access to community water supply. Thus it can be seen that only 16 per cent of total population in the country have access to water supply. Similarly, in respect of sewage disposal facilities, only 18 per cent of total population is covered by sewage system or adequate disposal.⁷ Lack of infrastructural facilities is not peculiar to India alone; it can be seen even in some of the developed countries like USA, France and Spain. In France in 1975, it was found that 2.8 per cent and 26.2 per cent of dwellings did not have running water and WC in dwellings respectively.⁸ In USA, it was observed (1976) that about 3.1 per cent of dwellings lacked one or more basic facilities. Similarly, in Spain it was found in 1975 that about 13.4 per cent of dwellings did not have running water, and about 48.6 per cent lacked bathroom and 17.6 per cent were without indoor WC.⁹ A few countries do appear to have a higher percentage [Egypt (93%), Libya (60%), and Venezuela (75%)] of facilities and Sri Lanka (14%), Nepal (3%). Afghanistan (3%) lower to what is obtained in India (access to community water supply).¹⁰ The main reason for the deficiency in the basic amenities is that most of the dwellings were constructed years back and are identified as substandard ones. It is seen that in India, over 50 per cent of dwelling units are 20 years old and functionally obsolete. Similar trends were also observed in other developed countries too. In Spain as late as 1975, about 42 per cent of the total housing stock was constructed before 1942.¹¹ Similarly, in France it was found that about 57.3 per cent of principal residences were built prior to 1948.¹² In the USA, about 34.7 per cent of housing stock was built before 1940. In Britain about 31 per cent was built before 1919.¹³ All this shows that

⁷UN Compendium of Social Statistics, 1977.

⁸Jon, Pearsall in Martin Wynn, (eds.), *Housing in Europe*, Croom Helm, London, 1984.

⁹Martin, Wynn in Martin Wynn, (ed.), *Housing in Europe*, op. cit.

¹⁰For details see UN Compendium of Social Statistics, 1977.

¹¹Martin, Wynn op. cit., p. 141.

¹²Jon, Pearsall op. cit., p. 25.

¹³S. Larry, Bourne *The Geography of Housing*, Edward Arnold, London, 1981.

deficiency in the basic amenities is not uncommon to countries both developed and developing, including India.

HOUSING SHORTAGE

Any shortage, generally implies a consequence of interaction between competing forces, etc., i.e., higher rate of demand as against the available rate of supply or production, under utilisation of resources, unequal distribution of wealth, unmitigated growth of population. Again, housing shortage is not unique to India alone, as is the case of other elements described in the countries referred earlier.¹⁴ For instance in Portugal it was found that shortages in housing which contributed to overcrowding to the extent of 24.8 per cent during 70s.¹⁵ A study sponsored by the ILO estimated that it would take 43 years to make good of the existing deficit and probably 90 years if the renovation of old and substandard dwelling units are taken into consideration.¹⁶ Similarly, in West Germany the deficit during 1966-67 was estimated at 2 million units.¹⁷ The USA, on the other hand, noticed housing shortage in 1834. As against the backdrop of shortages in developed countries, the Indian scene is described in Table 5.

TABLE 5 HOUSING SHORTAGE IN INDIA—1971 to 2000

Year	Shortage of dwellings (in millions)		
	Total	Rural	Urban
1971	14.5	11.6	2.9
1981	21.3	16.5	4.8
1985	23.6	18.0	5.6
1991 (expected)	27.4	20.2	7.2
2000 (expected)	39.10	29.80	9.3

SOURCE : 1. National Building Organisation.

2. Housing Finance in India: City and Industrial Development Corporation of Maharashtra Ltd., Bombay.

It is clear that the shortage in dwellings has continuously increased from 14.5 million in 1971 to 23.6 million by the end of 1985. Further,

¹⁴Cynthia Gobin Ghorra, "Public Policy in a Context of Crisis: The French Housing Programme of Habitat 88", *Planning and Administration*, IULA, Vol. 13, No. 1, spring 1986, pp. 25-30.

¹⁵J. Gaspar, "Urban Growth—Portugal", Unpublished paper, Lisbon, 1980.

¹⁶International Labour Office, *Employment and Basic Needs in Portugal* Geneva, 1979.

¹⁷Declan, Kennedy, "West Germany" in Martin Wynn (ed.), *Housing in Europe*, op. cit.

the crisis is more clearly discernible in rural areas than in urban areas. The 'crisis' can be brought into greater relief when viewed against the background of growth of population *vis-a-vis* the supply or availability of housing. The average size of Indian family is 5.5. During 1901-81 the supply of finished housing has increased from 47 million to 114 million while population has increased from 238 million to 685 million. Even according to the standard size of an Indian family the required number of housing units works out to 137 million as against the available number of units of 114 million thus leaving a gap of 23 million units. The unwieldy gap has resulted mainly due to: (i) slow and tardy additions to the existing housing stock, (ii) lack of attention to the need of repairs and maintenance of old building stock; and (iii) break down of traditional joint families.

NATIONAL HOUSING POLICY¹⁸

In tune with the importance of 'housing' as an index of economic development, the Government of India took the lead and initiative in augmenting the housing sector, but its role was rather limited till the beginning of Fifth Five Year Plan (1974-79). Till 1974, the role of government has been limited to provision of subsidised housing on a marginal scale for the economically weaker sections of the society in addition to funding the state government and other public sector organisations towards housing projects such as land acquisition and construction of LIG and MIG dwelling units. Such financial assistance on a limited scale was also made available to lower and middle income groups. In the Fifth Five Year Plan, a provision was made to provide house sites to rural landless people on a limited scale in addition to evolving schemes for implementation in urban areas. As a consequence, between 1950-51 and 1978-79, the public sector alone has been able to construct about 2.05 lakh dwelling units for plantation labour and industrial workers; 3.36 lakh units for low income group people; 1.42 lakh units for HIG and others and 5.6 lakh units in Rural House Site-cum

¹⁸National Housing Policy is clearly stated in the Five Year Plans. The First Five Year Plan clearly accepted that the central government is directly concerned with the subject of housing and it should be provided primarily to the low, and weaker sections of the society. The objectives of the Seventh Five Year Plan also further confirmed the nation's concern in the subject of housing. The objectives of the Seventh Plan are: (1) promotion of self-housing, provision of sites to the landless poor and financial assistance for construction of dwellings in rural areas; regularisation of prices within the paying capacity of targetted beneficiaries; regulation in the cost of land, modification in building bye-laws in order to reduce the cost of construction; and science and technology efforts in order to improve building technology and in the usage of local building materials.

housing units in addition to distribution of 77 lakh house sites for the landless people in rural areas.¹⁹

Apart from the government, other public institutions such as LIC and GIC, PFO and banks both nationalised or otherwise, have been playing significant roles in the field of housing. The individual shares of investment in national housing programme is presented in Tables 6, 7, and 8.

It can be seen in Table 9 that the scale of investment from the government is much lesser than its scale of investment from private sector, particularly household sector. During the period of 1950-80, total public investment in housing including government, public enterprises, departmental undertakings and grants-in-aid was estimated to Rs. 3,053 crore. On the other hand, the investments made by the private sector during the corresponding period was of the order of Rs. 12,740 crores²⁰ almost four times the public investment. The lower levels public investment in comparison to the private sector, may perhaps be due to other pressing priorities in the promotion of country's development, coupled with limitations on public financial resources.

As can be seen, the percentage of investment in housing as against total plan out-lay is on decline though in absolute terms the total investment has progressively increased from the First through Sixth Five Year Plans. The scale as well as percentage of state investment in India stands favourably in comparison with developed countries.

In addition to public financial institutions, government, other major specialised housing financial agencies, namely, HUDCO, HDFC and state Cooperative Housing Finance societies also participate in the housing activity and have achieved remarkable success in the efforts. While the LIC had provided loans to the tune of Rs. 1,593 crore up to March, 1984, the HUDCO had sanctioned about Rs. 20.85 lakh of dwelling units with a total sanctioned loan amount of Rs. 1,812 crore, of which Rs. 993 crore were actually disbursed. Similarly, HDFC also sanctioned about 1.11 lakh dwelling units with a total loan sanctions amounting to Rs. 424 crore, of which Rs. 277 crore were actually disbursed.

The Seventh Plan (1985-90) envisages investment of the order of Rs. 2,458.21 crore towards Housing development alone out of Rs. 4,259.50 crore allotted to Housing and Urban Development Sector as against a total plan out-lay of Rs. 1,80,000 crore.

The national policy envisages a number of schemes to cater the housing

¹⁹*Draft Fifth and Sixth Five Year Plans*, Government of India, Planning Commission, p. 260 and p. 390.

²⁰*Sixth Five Year Plan, 1980-85*, Government of India, Planning Commission, p. 390.

TABLE 6 ALLOCATION OF LOANS BY GIC AND LIC FOR SCHEMES—(YEARWISE)

Name of the agency	Scheme for which loans allocated	Loan Amount allocated (in crore)								Total	
		II Plan	III Plan	1966-69	IV Plan	V Plan	1978-79	1979-80	1980-81		1981-82
GIC	Village and EWS Housing	—	—	—	—	—	14.0	14.0	16.5	17.63	62.13
GIC and LIC	Social Housing	17.14	60.0	37.0	71.0	71.6	19.9	41.5	44.0	43.4	406.7

Source : Ministry of Works and Housing, Government of India.

TABLE 7 AGENCYWISE DISTRIBUTION OF LIC LOANS FOR HOUSING DEVELOPMENT

(in crore)

Name of the agencies/or scheme	Total Loans distributed up to March 1983					
	1978	1979	1980	1981	1982	1983
State Governments Apex Co. op. Housing finance societies, HUDCO, Housing Boards; on mortgage houses, own your home, coopera- tive societies of public Ltd., employees; individual employees or the corporation, LIC staff, etc.	814.5	899.5	1,028.5	1,141.4	1,271.3	14.16

SOURCE : *Annual Reports of LIC.*

TABLE 8 LIC'S INVESTMENT IN HOUSING—YEARWISE

(in crores)

Year	Gross amount invested during the year in housing	Amount of outstanding invest- ment in Housing at the end of the year
1968-69 to 1976-77	526.55	2,908.66
1977-78	86.0	668.64
1978-79	71.87	633.93
1979-80	114.23	723.97
1980-81	93.49	791.93
1981-82	109.40	873.07
1982-83	174.77	967.11

SOURCE : *Annual Reports of LIC.*

needs of various sections of the society. The profile of schemes is presented in Table 10.

Despite the alround efforts, housing for all still remains an unfulfilled objective. It is estimated that, on an average, a rural dwelling unit may cost Rs. 4,000 (apx.) while the cost of the same in urban area may be around Rs. 15,000 if the accepted minimum norms are followed.²¹ With 48 per cent of total population living below the poverty line, the cost projections still defy implementation.

²¹Working group on Funding of Housing, in M.A. Muttalib and A.A.M. Khan, (eds.) *Public Housing*, Regional Centre for Urban and Environmental Studies, Hyderabad, 1982.

TABLE 9 INVESTMENT BY THE PUBLIC AND PRIVATE SECTORS DURING DIFFERENT FIVE YEAR PLANS

(in crore)

Plan Period	Investment			
	Public	Private	% of investment by private sector to total investment	% of investment in Housing by public to total economy
I Five Year Plan	250	900	78.26	34
II Five Year Plan	300	1,000	76.92	19
III Five Year Plan	425	1,125	72.58	15
IV Five Year Plan	643	2,140	76.89	12
V Five Year Plan	1,044	3,636	77.69	10
VI Five Year Plan	2,114	10,455	83.18	8
VII Five Year Plan (allocated)	2,458	29,000 (anticipated)	92.18	—

SOURCE: V, VI and VII Five Year Plans and housing finance in India, CID, Bombay.

TABLE 10 TYPES OF SCHEMES IMPLEMENTED—PHYSICAL PROGRESS MADE SINCE ITS INCEPTION AS ON JUNE 1982

Name of the Scheme	Year of introduction	Number of Houses		Amount in Crore
		Sanctioned	Completed	
Integrated subsidised Housing scheme for Industrial workers and EWS	1952	2,52,694	1,88,871	126.57
LIG Housing	1954	4,33,430	3,42,786	239.46
Subsidised Housing Scheme for Plantation Workers	1956	42,190	23,806	—
MIG Housing	1959	56,548 *	46,430	124.36
Rental Housing Scheme for State Government employees	1959	39,355	35,227	62.21
Slum clearance/Improvement Scheme	1956	1,69,475	1,24,694	—
Village Housing Projects	1957	1,06,801	71,750	27.24
Land Acquisition and Development	1959	34,977.98 (Land acquired)	18,802.54 (Developed)	184.06

SOURCE: Ministry of Works and Housing.

Most private dwellings in the country are developed on individual basis—the prospective owner purchasing a developed plot of land and

building on his own or purchasing a tenement from the apartment promoters by cooperative societies or public/private sectors. While the liberal participation of multiple agencies is a welcome sign; it also creates equally diverse problems like uneven spatial development and monopolistic tendencies in construction sector leading to rapid escalation of prices and artificial scarcity of the essential building materials and land. In order to arrest the upward tendencies in prices, the government had introduced a number of measures such as large-scale acquisition of urbanisable land and developing it either on its own or through allotment to cooperative societies or prospective users at affordable prices. Another major step the government has taken in this direction was the enactment of Urban Land Ceiling Act in 1976. While these measures have been taken in relation to land, no effective steps have been taken with regard to the regulation of prices of building materials, except supply of cement through government. The combined effect of all the measures merely accentuated the problem rather than resolving them. The dysfunctional consequences may be the result of dogmatic approach rather than action oriented approach in implementing the acts including the Rent Control Act and Land Acquisition Act. Covert attempts by the influential lead to encroachment and diverse pattern of malpractices. The craze for house sites or houses disproportionately larger than requirement is pronounced in big cities and towns. It is here that the government may have to use its machinery and apply regulatory measures. This does not mean that the role of private sector and other sectors in housing activity is discouraged. Participation of private sector, particularly cooperative sector is inevitable in the country's housing development. But the government has to regulate its activities and make all possible efforts to promote the private sector activity through provision of financial assistance either on its own and or through different financial institutions.²²

HOUSING MANAGEMENT-REFORMS

Viewed against the background of measures and policies the government, in the light of certain lacunae noticed, adopted the following framework for reforms.

1. The social, economic and cultural background of the people must be taken into consideration before taking up housing schemes;
2. Special imbalance causes growth of slums and poor sanitation. Construction of dwelling units by the government must be based on concretised demand in a given area;
3. Before implementing any housing scheme there is need to analyse

²²It is observed that in the USA, saving and loan associations (46%) and banks (26%) were the major sources of Residential mortgage finance during 1970-75 (Source: Board of Governors, Federal Reserve System, 1976).

the purchaser preferences regarding the type of housing. For instance, preference for independent houses, or flats in multistoried building;²³

4. Principles of social housing need to be observed in right perspective. The concept of social housing is not peculiar in India alone. Even the developed countries like Germany, USA, UK and France have also adopted under different terminology, for instance, 'Public Housing', Council Housing.²⁴ The main object of public housing everywhere is same, for instance, provision of cheap housing for the poorer sections of the society. The number of dwelling units constructed with this objective ever since inception of the scheme in 1952 is already presented elsewhere in this paper. The main drawback commonly found in the scheme is that the benefits do not reach the target clientele. For example, the standards pertaining to LIG dwellings under social Housing are unrealistic with a result they come to be occupied by people other than those sections for whom they are intended. Misappropriation of benefits can be found every where in the world and will continue and can only be kept under check.²⁵
5. Similarly, in the case of general allocation of house sites also a new orientation is necessary.²⁶ The present methods of allocating

²³If the public sector is well managed it may serve as a means to stabilising price increase in private sector otherwise it will have exact negative effect. The success of public sector depends on the types of housing provided, location selected and on public attitude to different types of tenure. (For details see: S. Larry Bourne, *op. cit.*, p. 219-20).

²⁴The concept of public housing evolved in the western countries when the private market was unable to produce housing for all quantitatively and qualitatively at reasonable prices, government itself stepped in directly by constructing Public Housing—housing built, owned and managed by the government at the national or local level. In due course of time the concept 'public' has been renamed to 'social'. For further details see: S. Larry Bourne, *op. cit.* p. 215.

²⁵In Germany, instances of misallocation of housing units under social housing was observed by the author. For details see: Kennedy, Declan, West Germany, *op. cit.*, p. 59.

²⁶A number of studies are there on allocation of housing by the public sector housing agencies. The allocation is carried out systematically. It starts with a stock of available or vacant housing units in terms of demand and classification of all housing stock from the point of age, structure, size, availability of facilities, location, environment, etc. Similarly, demand for public sector housing from the houseless people will be collected from various sources notifying the people's needs and accordingly the aspirants are classified on priority basis: homeless, people who have rehabilitated, employees who migrated on transfer, etc. The public agencies maintain the registers containing all the details through undertaking prior surveys primarily at the local level through local bodies. For more details see F. Gray, "Selection and Allocation in Council Housing", Transactions, Institute of British Geographers, Vol. 1, No. 1, pp. 34-46, Also see: S. Larry Bourne. *The Geography of Housing*, Edward Arnold, London, 1981, pp. 221-22.

the house sites is done by lottery or auction, which does not guarantee reaching of the benefits to those who need them. Both the methods depend on factors of luck and wealth respectively. An intensive survey based on the applications received may be necessary and segregation of different classes of people according to their income under different house plot categories—LIG, MIG in order to curtail undue competition;

6. Ineffective regulation of prices of building materials also affects housing development and leads to decline in house production, particularly private sector. This was even noticed in developed countries.²⁷ Regulation of prices is necessary in the present inflation period;
7. Introduction of Rent Control Act (RCA) has not contributed much. the Act was introduced with an objective of regulating spiraling rents. In comparison to positive protection intended for the tenants the Act has led to serious repercussions in the overall housing development as it has acted as a disincentive to those who can invest in housing. Introduction of RCA is not unique to India alone but even developed countries have also introduced at various stages in different periods, but the act was replaced by them with incremental increase when the original Act was found ineffective.²⁸ Similar attempts can also be made in India;
8. From the point of economic constraints, the country can go for repair and renewal of substandard and old stock of houses both in rural and urban areas instead of going for new constructions. Renovation, and renewal can be done in two ways:

- (i) Demolition of highly damaged and old housing units,
- (ii) Provision of better environmental conditions, particularly basic amenities. Thus not only the housing shortage can be reduced but even the city fabric can be maintained. These two programmes can be directly undertaken by either the state government or it can be delegated to local authorities, private enterprise and cooperative societies by providing low interest or interest free loans to the private sectors and grants to the local authorities. Urban renewal and repairs of old and poor housing stock is

²⁷In Holland, it is because of escalation in prices of building materials, number of annual constructions have gone down from 11.6 per 1000 inhabitants in 1973 to 7.7 in 1978. Similarly, in West Germany from 11.5 in 1973 to 6.0 in 1978, and in France from 10.9 in 1972 to 8.4 in 1978. (For details see: *Annual Bulletins of Housing and Building Statistic for Europe*, ECE, Geneva, UN, New York).

²⁸Rent Control was introduced in many western countries. In Great Britain it was introduced in 1915, in France in 1914. For details see Wynn, Martin *op. cit.*

also found in many developed countries.²⁹

9. The government may encourage the departmental housing through provision of long term loans and grants-in-aid as is observed in police Housing.
10. Slum clearance, environmental improvement programmes should be taken-up more rigorously. Slum clearance does not mean demolition of all the dwellings but selective replacement of the ones which are identified as old and the poorest. The other can be repaired with the provision of basic amenities. This is necessary to maintain city fabric; and
11. The government must insist all the industrial entrepreneurs—public or private to provide housing for their employees on their own. The government can encourage the industrialists through provision of lands and long term loans.

So far the role of government in general for better housing in the country along with the addition of housing units to existing stock by the government under different categories during different periods has been discussed.³⁰ The role of private, public enterprises, cooperative sectors in development of housing needs upgradation. To promote private and co-operative sectors on a big scale government has to take new measures or amend the existing policies which are coming in the way of their active participation. This was even observed in Western and other developed countries where the quantum of investment in housing by the private sector is substantial. The share of private sector in housing in Netherlands is 52.8 per cent. Similarly, in Spain it was found 90 per cent, in West Germany it was 75.5 per cent during 1960-75 and in Belgium it was 65.6 during 1964-74.³¹ It can be seen that the role of private

²⁹Denmark encouraged improvement of old stock housing. The government provided 60 per cent of the total cost of renovation as loan at the rate of 6.5 per cent interest repayable in 20 years to the individual home owners, non-profit organisations which come forward to undertake this work. In the case of local authorities which take the responsibility, the total cost of renovation will be shared by the local authority and the central government. Similar efforts were made by the Government of France by providing grants to the housing association and non-profit organisations. For more details see: Ian. Haywood, Denmark and Pearsall, Jon. France, in Wynn, Martin (ed.) *op. cit.*, pp. 206, 10, 33-35, 40, 61 and 5.

³⁰The number of housing units constructed by the public sector has been increased from 40,000 in 1972-73 to 63,000 in 1977-78 (Source: NBO). Since 1983-84 till June 1986, over 4,87,500 houses were constructed and allotted to the EWS by various state governments (*Indian Express*, August 2, 1986, Minister of State for Urban Development).

³¹*Annual Bulletin of Housing and Building Statistics for Europe 1975 ECE/UN*, New York 1976).

sector is highly important if the backlog in housing is to be reduced quickly. The Planning Commission felt that if all the efforts are made in a concerted manner the housing crisis can be met in the next 20 years.

To promote private, cooperative housing on a large scale the government is advised to adopt the following measures/incentives for the private builders.

- (i) to construct according to the minimum standards prescribed by the NBO, the average cost of the construction in urban area will be around Rs. 22.20¹² which is not a small amount for low and middle income groups. Keeping the percentage of people living below the poverty line in view, the government may come forward to provide cheap or interest free loans according to the economic status of those seeking to build their houses. The government can also arrange loans through commercial banks by provision of guarantee;
- (ii) the present ULC Act is found ineffective. It needs either to be amended suitably or might altogether be repealed. Because of the ULC act large tracts of vacant land are lying in the midst of cities and towns awaiting clearance. This makes for artificial scarcity of lands and lead to rise in land value which in turn hinders private housing activity significantly;
- (iii) constant vigilance on the escalation in prices of building materials and other malpractices, would certainly pay rich dividends;
- (iv) pressure on cities and big towns have been constantly increasing due to immigration. In order to reduce this, the government can develop the small and medium towns by decentralisation of industries from the core cities. This can be done through modifying the national industrial policy suitably;
- (v) the existing building standards from the point of cost of land, building materials, labour wages, etc., need to be reformulated with measures to curb the illegal building activities;
- (vi) discouraging speculative tendencies on vacant lands as it has already created artificial scarcity and ultimately turned as a big business for a few; Heavy tax must be levied on vacant lands lying without construction for more than two years or it should be acquired by the government for public purposes.
- (vii) the procedure of issuing the building permits and completion certificate by local authorities is complex and combersome. They need to be simplified and made less time consuming. The local authorities have a vital role to play in reducing corruption in this context; and

¹²Poor Housing Facility in Industrial Sector, *Yojana* Correspondent, *Yojana*, 1-15 July, 1986, p. 34.

- (viii) by extending generous grants to the local authorities, adequate infrastructure facilities be provided in new layouts particularly water supply, drainage, roads and electricity, as the provision of basic amenities will have its own effect on the private investors in housing.

Encouraging participation of private sector, need not block the need to regulate private housing activity.

CHECK ON PRIVATE SECTOR

Promotion of private sector besides having the positive effects also has its own negative effects. The government may have to regulate the private sector and exercise punitive control on its misdeeds. This is necessary in view of the present trend of concentration of housing activity in the hands of very few. The government may have to regulate illegal constructions, misuse of grants, loans and subsidies which are being provided by the government in the form of cash/kind; the government has also to keep an eye on the rents, and the price at which these builders are selling the flats or individual houses. To regulate the prices of the constructed housing units, the government has to fix the cost of the housing units from the point of effectiveness and reasonableness.

STATE-COOPERATIVE AND NON-PROFIT INSTITUTIONS

Apart from the individuals, the cooperative, philanthropic societies and other non-profit organisations can also play an innovative and practical role in the field of housing. Participation of such institutions was observed in the developed countries too. These organisations can play their role in two ways:

- (i) they can directly involve in construction and selling at affordable prices; or
- (ii) they can act as intermediators in getting loans, grants and subsidy to the eligible aspirants from the government, commercial banks and other public financial institutions by giving guarantee.

Although encouragement of cooperative sector is suggested, in view of misdeeds being committed by a few, it is necessary that the government has to take steps simultaneously in regulating its activities. The government should come down heavily on irregularities identified in the usage of building materials, and in the standard of housing units constructed by them and in the allocation of housing units to the aspirants. On the other hand, to promote the cooperative sector and such other non-

profit organisations the government has to act as a catalyst by providing cheap loans through commercial banks and subsidised building materials and lands with provision of basic amenities. The public financial agencies like LIC and GIC can also participate in a big way to promote cooperative sector by funding them, apart from the prospective purchasers themselves, and public housing agencies like HUDCO. These cooperatives apart from undertaking new constructions, can also help the owners whose houses need renovation and repairs. □

*The Emerging Philosophy of Urban Renewal**

M.A. MUTTALIB

URBAN RENEWAL is an innovation of the second half of the 20th century—an answer to urban crisis—an increasing universal phenomenon. With its multi-dimensional concept, it has evoked multi-disciplinary interest. As an ideology, it has come in conflict with the goals of freedom and equality. As a public policy, it has given rise to a variety of basic socio-economic, political and organisational and managerial issues. As a process, it has exposed the hardware approach of the urban planners and thereby, has set in the process of learning and unlearning with the conventional planners and managers.

GLOBAL PHENOMENON

Urban renewal has passed through several phases as a remedial measure to meet urban crisis during the last three decades of its experimentation. In the wake of a long phase of success and failure of several forms of its strategies in the developed countries, there are emerging certain basic components of its philosophy. Despite the complexities of the urban phenomenon in the developing countries where similar urban crisis is visible, one may identify the universality of its basic components.

Conceptual Variations

Often in popular parlance, urban renewal is used interchangeably with redevelopment and rehabilitation, and even conservation. In fact, they may be distinguished from one another in terms of their genesis, planning, execution and funding on the one hand, and the clientele interest, on the other. Urban renewal has come to embrace comprehensive connotation. It represents a wider spectrum of a changing social phenomenon

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with redevelopment and conservation occupying two opposite ends and with rehabilitation, occupying the mid-position. If redevelopment connotes change, revolutionary in character, rehabilitation is incremental as a changing process, though both are the indices for the direction in which the urban phenomenon is taking shape.

Etymologically, urban conservation may appear to be opposed to all forms of social change. However, in practice, it is a process of recycling urban property or environment to a new use, refuse or proper use to meet the new socio-economic needs without significant alteration in the fabric. In fact, every effort is made to retain the structural uniqueness. As a process of change, it is closer to rehabilitation in the sense that the structure is retained in its essence. Nevertheless, in rehabilitation the structural alterations and repairs may be introduced to fit in the new urban environment or to meet the changing socio-economic needs. Thus, if planning takes over rehabilitation, planning itself becomes a part of conservation efforts.

Redevelopment is essentially a new plan for a town or for its area. In either case the plan conceives the clearance of the existing urban property before the construction of new structure with a new layout different from that of the existing town or its area. The emphasis is on physical planning and rebuilding in the wake of bulldozing of obsolescent structures along with new uses of urban land. Chronologically, in developed countries, redevelopment in its existing connotation, preceded rehabilitation and conservation. Rehabilitation and conservation had to be attempted when redevelopment played a havoc. Far from improving the lot of the weaker sections, redevelopment added to their problems. Places and buildings were bulldozed which could have helped solve the problem of housing shortage or whose conservation would have helped retain the unique personality of the city. All this led to the adoption of the devices of rehabilitation and conservation as integral parts of the urban renewal programme. With this urban redevelopment is now no longer, the synonym of urban renewal. It is just one component with a 'clean sweep' in the urban transformation. Urban renewal, in other words, may involve not merely radical but also gradual and incremental changes.

As against urban redevelopment, rehabilitation is a process of putting the existing buildings or existing areas which have become outdated in terms of new socio-economic needs, back into a worthwhile state. To put it differently, it introduces structural alterations with the outdated properties and affording a new lease of life to them, in the sense that under conservation buildings will not only be retained but accordingly, commensurate changes in planning, will be effected.

In terms of funding, redevelopment is the costliest of all forms of urban renewal. Also, it is the entire public responsibility with the

involvement of heavy public investment. Therefore, the government/city corporation is tempted to act in an arbitrary manner without consulting the interest involved. Often, it is not surprising that redevelopment programme is resented sometimes, leading to public uproar. On the other hand, rehabilitation and conservation may be partly or entirely, the public responsibility. They may be the outcome of joint efforts of the government and the private owners. In West Berlin, 30 per cent of the cost of rehabilitation is met by the owner and 70 per cent by the government.

In rehabilitation, the public agency concerned may offer assistance in the form of grants, subsidy or loans with suitable conditions for their utilization for incorporating alterations in the property. More or less, similar conditions may be there for urban conservation, if the property is to be still retained under the property-owner with a difference that the public agency may take it over in the public interest after payment of compensation. Thus, with the possible interaction with the private owners, some form of consultation that takes place on the part of public agency, tends to reduce the rigour of public action. The western experience has established the value of community participation in urban renewal programme, if its smooth sailing is to be assured.

In terms of clientele benefit also, redevelopment, rehabilitation and conservation may be distinguished from one another. With the public interest as the main thrust, redevelopment may or may not fetch any benefit to the individuals, affected by the programme. In conservation and rehabilitation the balance is struck between the private and public interest, perhaps with a tilt towards public interest, more in conservation than in rehabilitation.

Tests for Urban Decay

The foregoing discussion leads to the basic question of urban decay around which it has revolved. The health of urban settlement can, by and large, be tested on the basis of: (i) quality of civic life, and (ii) status of urban property. In other words, urban decay can be established if the urban settlement suffers from: (a) social degeneration, and (b) decay of urban buildings and land. Social degeneration stems from environmental, social and economic decline of the urban property. They may be the result of decline in the basic services like water supply, drainage, health care, increasing population density, poverty, illiteracy and other community services.

Decline in the basic services may be the outcome of: (i) high density of population; (ii) inadequacy of maintenance of civic services; (iii) migration of affluent people to the suburbs; (iv) migration of the rural people to the inner city; (v) loss of urban gravity arising out of the shift

of socio-economic, political and administrative functions; and (vi) inadequacy of community services, etc.

The decay of urban property becomes visible with the obsolescence or dilapidation of buildings and property, their misuse, nonuse or disuse of land—all giving rise to the acute problem of housing and rehousing. The decay of buildings and land may arise out of their age, narrow lanes, traffic density, inadequacy of means of transportation. Absence of certain community services like parks, playgrounds, shopping complexes, fire services, parking places may also lead to decay of urban buildings and land. Finally, the neglect of local monuments, lack of sense of history of the urban settlement, thereby, improper preservation of its unique personality, may also lead to urban decline.

Goals of Urban Renewal

The goals of urban renewal have roots in the desire to maintain the health of the urban settlement. The soundness of health depends on a number of factors: (i) age of buildings; (ii) functions of the city; (iii) financial adequacy of civic government; (iv) capacity of the residents and users; (v) population density; (vi) traffic and transportation; and (vii) maintenance of basic services. The negligence of these factors, may cumulatively contribute to urban decay. Depending on the stage of decay, the strategy of urban renewal has to be decided. In other words, whether the decay can be treated through redevelopment, rehabilitation or conservation or through their combination, can be determined on the existing nature of decay.

Determinants of Priority in Urban Renewal

By and large, there are three-fold factors that may determine the scale of priorities for undertaking urban renewal: (i) human sufferings; (ii) financial investment; and (iii) popular sensitivity. Considering the complexities of the determinants of priorities in urban renewal programme, the urban renewal programme will have to be phased out comprising the following in varied combinations:

1. High degree of human suffering, low degree of financial investment and low degree of popular sensitivity;
2. High degree of human suffering, medium degree of financial investment and low degree of popular sensitivity;
3. High degree of human suffering, high degree of financial investment and low degree of popular sensitivity;
4. Medium degree of human suffering, low degree of financial investment and low degree of popular sensitivity;
5. Medium degree of human suffering, high degree of financial investment and low degree of popular sensitivity;

6. Medium degree of human suffering, medium degree of financial investment and low degree of popular sensitivity; and
7. Medium degree of human suffering, medium degree of financial investment and medium degree of popular sensitivity, and so on.

In all these combinations effort has to be made to reduce human suffering, and avoid sensitivity as far as possible. Financial constraints take a secondary position when human suffering and popular sensitivity are of high degree. But where high financial investment is involved and when it becomes beyond the capacity of the urban renewal agency, the programme gets delayed. The urban renewal agency will have to adopt a strategy that may help establish credibility with the people, on the one hand, and depoliticise its programmes on the other, so that money does not get locked up. In the circumstances, the hardware approach of planners is most likely to cause resentment when individual interest comes in conflict with the programme. Therefore, it is desirable that the elected representatives are associated at the policy and programme levels and smaller neighbourhood advisory committees are constituted to obtain the neighbourhood consensus.

Among the determinants of priorities of urban renewal, human suffering assumes the highest place. Lack of certain basic services like water supply, drainage, health care may, at times, achieve the highest priority considering the high degree of suffering of the people. Hence, in every urban renewal programme these services should be extended depending on the requirements, irrespective of the money involved and the individual interest that may come in clash with such programme. The conveniences of the community, like roads, transport, electricity occupy the second place in the scheme of things. Other community services like education and recreational services will contribute to the intellectual and spiritual heights.

Basically, popular sensitivity is involved in all conflicts between public and private interest. There may be a variety of forces of such conflicts such as individual property, employment, religious and cultural facets, social and family life, poverty, ignorance and issues of social justice. Hence, any programme that may touch upon any one of these issues may not only cause resentment by the affected parties but also, may make political capital out of them by the political parties, which always try to make things too hot for the government of the country to continue with the programme.

Financial investment is a subject of great concern for an urban renewal agency since it envisages a highly expensive exercise. It would not be surprising that there is increasing appreciation in the developed countries that urban renewal programme can not be treated as a local problem. There has emerged a pattern of joint effort on the part of all levels of

government, sometimes discarding constitutional, legal, political and organisational barriers among them. The assistance of the higher levels of government may assume different forms, financial, managerial or/and technical.

The next issue for urban renewal is: which of its forms, *i.e.*, redevelopment, rehabilitation and conservation should be employed, for what levels of priority? In fact, it may vary from one form of programme to another. For instance, some of the obsolescent properties may entail clean sweep, while others could be treated through rehabilitation. Yet others, depending upon historic and structural significance, may have to be preserved with suitable alterations or could be recycled for new use or re-use in order to meet the national problems like housing shortage.

Likewise, redevelopment, rehabilitation or conservation as such, are a means to an end. They may or may not cause hardship to the people concerned. Sometimes, even a seemingly innocuous effort like rehabilitation may be resented, while a redevelopment exercise in a particular situation may not become sensitive and therefore, may not cause public resentment. One such move which may not cause or causes least hardship to any individual, should be adopted on priority basis.

Managing Urban Decay

Urban renewal programme should be accepted as a development necessity. In fact, the constant use and pressure on the services may cause urban decay and therefore, it becomes the public responsibility to restore them and to extend such services in the public interest.

The complexity of urban renewal exercise presupposes an organisation that could mobilise not only support from the neighbourhood but also from various agencies involved. It has to be somewhat superstructure or a grand coordinator, a trouble-shooter and a mobiliser of resource. Above all, it has to be highly sensitive to popular needs and pressures.

In terms of composition, it is desirable that there should be a provision for representatives from various funding agencies and technical departments but also, should have an option to coopt or make use of the service experts and other knowledgeable in the affairs to be managed. It has to have regular contact with the institutions of learning for scientific analysis of the problems in order to depoliticise the issues to a possible extent.

The government should try to evolve a national consensus to give high priority to urban renewal as such in the National Plan. People should be induced to donate funds to the urban development agencies in their efforts to preserve local monuments; and for such gestures the government may even consider tax relief. Efforts should be made by the government to depoliticise various facets of redevelopment programme. This will not only reduce the pressure of work of the urban agency but

would help minimise delays and thereby, expenditure. Always a difficulty is encountered when different political parties are in power at the local, state and central levels, particularly, in view of their different approaches and different emphasis on the problem of urban decay. It is in this respect that research institutions can play a more objective role in the proper identification of the problem of decay and the phasing of execution of urban renewal programme and thereby, could help depoliticise the whole atmosphere. □

Exemptions and Loss of Property Tax Base: National and International Scene

O.P. BOHRA*

WITH THE rapid growth of urbanisation, the demand for municipal services has accelerated in the urban centres both in developed and developing countries. Further, due to inflation and growing management requirements, the cost of service provision and maintenance has increased substantially. This has raised expenditure requirements of the urban local governments enormously. While the financing structures of urban local bodies have varied widely, it would be found that the only local tax which is levied in virtually all the cities and urban agglomerations around the world is property tax.¹ The trends in property tax yield between 1965 and 1979 indicate that as percentage of GDP, property tax yield has increased over the years from roughly one per cent to four per cent in the developed and industrialised countries.²

In India, property tax is the most important local source of revenue for financing urban public services. Generally, it is the largest source of revenue, where octroi is not levied.³ However, the growth of property tax has not kept pace with the local government expenditure needs. Because of the vital significance of property tax, factors that constrain growth needs consideration. The well established constraining factors are assessment lags and leases, rent control, tax dispute and exemptions and rebates. The objective of this article is to review structure of property

*Author gratefully acknowledges valuable comments on an earlier draft of this paper by Dr. Shyam Nath.

¹Johannes F. Linn, "Urban Financing in Developing Countries", in Roy Bahl (ed.), *Urban and Government Finance—Emerging Trends*, 1981, p. 266.

²*Taxes on Immovable Property*, Report by the Committee on Fiscal Affairs and the ad hoc Group on Urban Problems, Director of Information, OECD, Paris, 1983, p. 176.

³"A Study of the Financial Resources of Urban Local Bodies in India and the Level of Services Provided", National Institute of Urban Affairs, New Delhi, 1983, p. 182.

tax exemptions and empirically analyse the erosion of property tax base due to exemptions and concessions granted to various categories of properties. Such exemptions are available to the properties occupied by government, educational establishments, hospitals, religious and charitable institutions and also to the properties belonging to the specific category of individuals. Unintended exemptions and concessions due to rent control legislations are not discussed here.⁴ The plan of the article is as follows. In the second section, the rationale for exemptions under property tax has been discussed. In the third section, the discussion is focused on structure and forms of exemptions in India and other countries. The fourth section reviews the estimates of loss of revenue due to exemptions and concessions. The final section contains conclusions and policy implications.

Rationale for Property Tax Exemption

The non public provision of some of the community services relieves government of the responsibility of providing them. However, the non public provision of community services is severally constrained due to the external effects of such services. The providing organisations may not be able to recover the full cost of the services provided due to problems of measurement of benefits in the presence of free riders. Under these circumstances, exempting such organisations from property tax may amount to granting subsidy not only to help recover the full cost but also to lower the delivery price to the residents. Thus, public subsidy in the form of tax exemptions represent a bargain for the public goods. Such exemptions minimize the government's interference in the private sector activities and promote a pluralist approach to satisfy the society's needs.⁵

Tax exemptions are basically tax reliefs to the institutional and individual tax payers. It is widely believed that tax exemptions encourage overinvestment in real estate. Further, wealthy organisations receive greater benefit as compared to poor organisations because exemptions are proportional to tax liability. So there may not be a general case to grant exemptions to organisations. But relief to individual taxpayers may still be warranted. Reliefs may be necessary to reduce the built-in

⁴For review of conceptual and empirical analyses of rent control effects see Abhijit Datta, "Rent Control and Housing in Delhi", *Economic and Political Weekly*, May 13, 1972; A. Bagchi and Shyam Nath, *Property Tax Reform in West Bengal*, National Institute of Public Finance and Policy, New Delhi (Mimeo), 1981; Government of Maharashtra, *Report of the Rent Enquiry Committee*, Bombay, 1981 and Shyam Nath "Impact of Rent Control on Property Tax Base in India: An Empirical Analysis", *Economic and Political Weekly*, May 14, 1984.

⁵S. Gold, *Property Tax Relief*, Lexington Books, D.C. Heath and Company, Lexington, 1979. p. 242.

regressivity of property tax⁶ and protect taxpayers against excessive increases in the tax burdens arising from inflation.

Even if one believes that subsidies are justified for the public goods being provided by such organisations, there are many situations in which it is inappropriate for such subsidies to be financed locally.⁷ If the benefit area of the facility provided by such organisations is much longer than that of the geographical area in which these organisations are operating, it would be more appropriate for a state or central government to finance any subsidy which is warranted.

STRUCTURE, FORM AND EXTENT OF EXEMPTION— INTERNATIONAL PICTURE

Full or Complete Exemption

In most of the countries, blanket exemption is granted to properties having a rateable value below the exemption level and to properties of specific categories of institutions. To take the latter form first, in USA and some of the other countries, complete exemption is granted to properties of: (i) foreign governments (embassies), (ii) federal, state/provincial governments, (iii) educational establishments and hospitals, (iv) churches, religious organisations, cemeteries and burial grounds, and (v) charitable organisations (see Table 1). In regard to the above coverage of exemptions, there are some exemptions and also some variations across countries which have been presented below:

Embassies: In Ireland, tax concession is given in place of exemption. In Australia and UK, local governments are compensated for the loss of revenue due to these exemptions. Interestingly in UK, a portion of the 'in lieu' payments is recouped directly from the foreign governments.

Government and its Agencies: New Zealand and Netherlands do not grant exemptions always. Federal and state governments pay the amounts in lieu of taxes to the local authorities. Many of the countries like Australia, France, Japan, UK, Zimbabwe and USA make grants to the local authorities to compensate for the loss.

Educational Properties: In the Netherlands, these properties are taxed and in UK concessions are given in place of exemption. New Zealand compensates local authorities for the loss.

Hospitals: Australia, France, West Germany, Ireland, the Netherlands

⁶For conceptual and empirical analyses of regressivity of property tax, see Shyam Nath, "Is Residential Property Tax Equitable? A Case Study of Calcutta", *op. cit.*, May 14, 1987, pp. 1190-96.

⁷Joan Shannon, "Residential Property Tax Relief—A Federal Responsibility," *National Tax Journal*, Vol. XXVI, No. 3, 1972, p. 499.

TABLE 1 EXEMPTIONS AND CONCESSIONS FROM PROPERTY TAX FOR DIFFERENT TYPES OF PROPERTY

Country	Embassy	Government and its agencies	Educational establishments	Hospitals	Religious Buildings	Cemeteries	Charities
Australia	Ex*	Ex*	Ex	Some Ex	Ex	Ex	Ex
Denmark	Gen. Ex	Gen. Ex	Ex	Ex	Tax	Tax	Ex
France	Ex	Ex	Ex	—	Ex	—	Some Ex
Ireland	Conc.	Ex	Some Ex	Gen. Ex	Some Ex	Tax	Ex
Japan	Ex	Gen. Ex	Ex	Tax	Ex	Ex	Tax
Netherlands	Ex	Some Ex	Tax	Tax	Ex	Some Ex	Tax
New Zealand	Gen. Ex	Some Ex	Ex*	Gen. Ex*	Ex*	Ex*	Gen. Ex*
Spain	Ex	Ex	Ex	Ex	Ex	Ex	Ex
Sweden	Ex	Ex	Gen. Ex	Ex	Ex	Tax	Ex
Switzerland	Ex	Ex	Ex	Tax	Ex	Ex	Ex
Turkey	Ex	Ex	Ex	Ex	Ex	Ex	Ex
United Kingdom	Ex**	Ex*	CONC	Some Ez*	Ex	Tax	CONC
United States	Ex	Ex*	Ex	Ex*	Ex	Tax	Ex

NOTE: Ex=Exempt, Gen=Generally, CONC—in the form of rate reduction, Tax—Taxable, Some—Sometimes.

*—Some payments are made to compensate for the loss.

**—A portion of the 'in lieu' payments are recovered directly from foreign government.

SOURCE: OECD (1983).

and Switzerland tax these properties. UK, USA and New Zealand compensate local authorities for the loss.

Religious Property: Denmark is a country which taxes religious buildings. New Zealand compensates local authorities on this account.

Cemeteries: These are taxed in UK, USA, Sweden, Ireland and Denmark. France levies as sort of land tax. New Zealand compensates local authorities for the loss.

Charitable Institutions: France, Germany, Japan and the Netherlands levy a tax on the properties of charitable institutions. Concession in place of complete exemption is granted in New Zealand and UK. In New Zealand, local authorities are also compensated for the loss.

Partial Exemption or Tax Relief to Taxpayers

Most of the taxpayers often get some relief which is related to their personal circumstances. Some of the countries give relief for new residence and many offer for personal circumstances which generally benefit the poor (Table 2). In France, new residences are exempt from the land and building tax for about first two years of its use. In West Germany, certain categories of new residences (low cost houses) with limits of specified floor area get relief for ten years in the form of tax only on land. In Japan, the amount of Fixed Assets Tax for a newly built residence is generally reduced by 50 per cent during the first three years. A tax rate reduction of 50 per cent in Spain is provided for 'protected' houses during the first three years of use, and in Turkey, a quarter of the tax value of dwellings is exempt during the five years following the date of construction.

Most of other allowances relate to people in reduced circumstances;—in New South Wales, pensioners get relief by half of the tax rate; people in hardships also get some relief in the form of paying tax in instalments and waiving interest charges;—in France, the old and infirm with low incomes get some special tax relief for principal residence;—in Netherlands relief is given in the cases of hardship and also occupier part of the tax is not levied up to less than ten square metres of the floor area;—in New Zealand also, the hardship or low income criteria is used for tax relief purposes. Similarly, in the UK, rate rebates are offered to those with low incomes and under hardship.

There are variety of partial exemptions or tax reliefs offered to taxpayers in USA. The most popular and common among other relief measures is the "Residential Circuit Breakers". Under the threshold approach an 'acceptable' tax burden is defined as some fixed percentage of household income (different income levels) and any tax above this portion of income is 'excessive' and qualifies for relief. Under the sliding scale approach, no threshold is defined. Rather a fixed percentage of property tax is rebated for each eligible taxpayer within a given

income class, the rebate percentage declines as income rises.

Besides circuit breakers, the most widespread relief for homeowners is the homestead exemption, which provides for exemption of a specified amount of a home's assessed value from the tax base. A closely related device is the homestead credit. It is also in the form of assessed value as in the case of homestead exemption. Several American States extend relief not only to homeowners but also to renters by means of a renter credit against the state income tax in the form of percentages of rent. Property tax deferred programme is used in a few states. A little used method of relief is that of tax freeze which provides the residential property taxes not to increase after a homeowner reaches the age of 65.

TABLE 2 RELIEFS FOR NEW RESIDENCES AND FOR PERSONAL CIRCUMSTANCES FROM PAYMENT OF PROPERTY TAX

Country	Tax	Relief for new residences	Relief for other circumstances
Australia	Rates	None	Some
Denmark	Service Tax	None	None
France	Property Tax	None	Some
Germany	Grundsteuer	Some	Little
Ireland	Rates	Some	Little
Japan	Fixed Assets Tax	Some	Little
	City Planning Tax	None	Little
Netherlands	Municipal Tax	None	Some
New Zealand	Rates	None	Some
Spain	Urban Land Tax	None	None
Sweden	Municipal Guarantee Tax	None	None
Switzerland	Recurrent Tax	None	None
Turkey	Immovable Property Tax	Some	None
United Kingdom	Rates	None	Some
United States	Property Tax	None	Some

SOURCE: OECD, *Taxation on Immovable Property*, op. cit.

Estimates of Loss of Tax Base

Very few attempts have been made to estimate the extent of loss from exemptions under property taxation. Actually, no one knows precisely how much real property is exempt from property taxation.⁸ The area of exemptions is very wide and much complicated. Hence, it is very difficult to give a precise picture of exempted real property from property taxation. A summary of a few of the estimates made by ACIR⁹

⁸H.J. Aaron, *Who Pays the Property Tax? A New View*, Studies of Government Finance, the Brookings Institution, Washington DC, 1975, p. 81.

⁹ACIR, *The Property Tax in a Changing Environment*, Selected States Studies, An Information Report, Washington DC, M-83, March, 1974.

along with the estimates by individual researchers is presented in Table 3.

It can be observed that the total exempted value as a proportion of total assessed value varied between 23 and 44 per cent in USA. For other countries for which information is available, exempted values constituted around 20 per cent of the assessed value in Ontario, 15 per cent in Kingston and 23 per cent in Bagota. Further, the maximum proportion of the total exemptions was claimed by government properties followed by educational establishments and religious and charitable institutions.

INDIAN SCENE

Full or Complete Exemptions

There is no standard framework in which uniform exemptions are granted to the special categories of properties. The exemptions given to specific types of properties vary widely from state to state and also between the local authorities. In most of the states, religious properties, charitable institutions, burial ground, etc., are completely exempted from the property tax, even service charges are not recovered from them. Educational establishments and hospitals are also granted exemption, though there may be some variation across the states.

The treatment given to the Central government properties and railways is same in all the states. The Central government properties are liable to pay only service charges. The pattern of exempting the state government properties differs from state to state. In the case of Andhra Pradesh, Karnataka, Tamil Nadu and Kerala, municipal legislations exempt places of public worship, charitable institutions, play grounds, libraries, etc. Maharashtra government compensates the urban local bodies for the loss of revenue due to exemptions to the state government properties. It may be interesting to note that the power to grant exemptions to properties from property taxation is vested in the state governments.

Partial Exemptions or Tax Reliefs

In India there is no partial exemptions as such or tax reliefs given to individuals as available in other countries. No relief is given to veteran, aged person or pensioners. Also, in general, no relief is given to new residential buildings. In addition to a 10 per cent allowance for maintenance and repairs which is given to all properties, certain relief is provided to owner occupied properties. The low cost and small houses or huts may fall under the general exemption limit of the rateable value, otherwise they have to pay the tax. Lastly, different and lower tax rates

TABLE 3 ESTIMATES OF LOSS OF BASE/YIELD DUE TO EXEMPTIONS—INTERNATIONAL SCENE

Source	State/City	Year	Total exemption as per assessed valuation	Proportion of each category in total exemption		
				Government establishment	Education and Health	Religious and Charitable tables
ACTR	Selected States ¹⁰	See foot note.	19 Min. 50 Max.	25 Min. 75 Max.	12 Min. 41 Max.	14 Min. 63 Max.
<i>Individual Researchers</i>						
Earnest Neufeld	New York City	1947-48	24	83	17	n.a.
Dick Netzer		1966	33	n.a.	n.a.	n.a.
Bird and Slack	Ontario	1967	20	n.a.	n.a.	n.a.
Paul V. Corusy	District of Columbia	1969	40	n.a.	n.a.	n.a.
Francine, Bourgeon, Maassen and Linn J.	Kingston and Jamaica	1971-72	15	n.a.	n.a.	n.a.
Roger A. Freeman		1973	25	n.a.	n.a.	n.a.
Weiler	City of Philadelphia	1974	27	n.a.	n.a.	n.a.
Alfred Balk		1974	41	85	15	n.a.
Quigley and Schmenner	Connecticut	1975	25	n.a.	n.a.	n.a.
Johannes Linn		1975	13	50	n.a.	n.a.
Tolar Check and Angreu	Syracuse (New York)	1979	44	n.a.	n.a.	n.a.
Johannes Linn	Bagota	1972	23	n.a.	n.a.	n.a.
Roy Bahl and Larry Schroeder	Philippines (Ilorilo, Albey)	1983	7.4-13.8	—	—	—

n.a.—not available.

SOURCE : Given in reference.

¹⁰ Arizona (1971), Florida (1971), Maryland (1969), Massachusetts (1971), Minnesota (1968), New Jersey (1971), New York (1971), South Dakota (1970), Washington (1971).

have been instituted in most of the local bodies to give relief to residential properties as against commercial and industrial properties.

Loss of Tax Base

Like other countries in India also, structure of exemptions is complicated. Because of poor maintenance of records, it is extremely difficult to estimate the total quantum of exempted real estate from property tax. The assessment of exempted categories of properties is also not done with full effort. A summary of the estimates provided by different sources is presented in Table 4. With the limited information available, it is difficult to generalise from the results. One can, however, get some idea about the loss of base/revenue due to exemptions granted. It can be observed that the value of exemption, varies from roughly 5 per cent to 8 per cent of the assessed value. Due to non-availability of data at the disaggregated level, it is, however, not possible, to find out which category of properties claimed higher exemptions. But, very crudely, it can be said that like many other countries, a sizable proportion of exemptions is claimed by government properties.

EXEMPTIONS, PROPERTY TAX YIELD AND LEVEL OF MUNICIPAL SERVICES

It is a well established fact that exemptions eat away the natural growth of taxable property value. Hence, they adversely affect the growth of property tax revenue. Empirical estimates have shown that the loss of tax base ranged, on an average, between 20 and 25 per cent in foreign countries surveyed here and between 5 and 8 per cent in India. Advocates of exemptions may argue that the loss of revenue due to exemptions does not constitute a sizeable proportion of the tax revenue as it is much lower than that in foreign countries.

At this stage one should not lose sight of the fact that marginal social worth of one rupee lost due to exemptions is much higher in India. Available information indicates that the level of local services measured as proportion of local government expenditure in the total government expenditures (column 4, Table 5), is extremely low. Further, local government expenditure constitutes less than one per cent of GDP which is extremely low as compared to most of the foreign countries. For a country like India one can, therefore, conclude that revenue foregone is a case of service foregone.

The revenue requirements of municipal projects which provide civic services have expanded considerably due to rampant inflation. Further, property tax which is the mainstay of local finances, has not risen to a level which really has hit a ceiling in the sense that per capita burdens cannot be increased any further. Property tax as per cent of GDP is very low as compared to many other countries (Table 5).

TABLE 4 ESTIMATES OF LOSS OF BASE/YIELD DUE TO EXEMPTION
INDIAN SCENE

Source	State/City	Year	Total exemption as per cent of total assessed valuation	Proportion of each category in total exemptions		
				Govern-ment estab-lishment	Educa-tion and Health	Reli-gious and Char-itable
KMFC	Karnataka	1976	—	15.4% of PT (C+S + Rly)	—	—
QJLSG	Ahmedabad	1973	—	7.56% of PT (chari-table)	—	—
MMFC	Bombay & Poona	1974	—	1.23% of PT (C+S)	—	—
MMFC	Bombay	1971-72	7.48% of ARV	—	—	—
MMFC	Poona	1975-76	4.65% of ARV	—	—	—
MMFC	Maharashtra	1975-76	5.86% of ARV	—	—	—
Francise, Baurgeon Maassen	Bombay	1971-72	8.2% of ARV	—	—	—
QJLSF	Bombay	1971-72	—	—	—	5.6% of PT
WBMFC	Calcutta	1982	1% of ARV (Fully ex-empted)	—	—	—

KMFC=Karnataka Municipal Finance Commission

MMFC=Maharashtra Municipal Finance Commission

WBMFC=West Bengal Municipal Finance Commission

QJLSG=Quarterly Journal of Local Self-Government

C=Centre, S=State, Rly=Railways, PT=Property Tax, ARV=Annual Rateable Value.

Thus, the loss of about 8 per cent of rateable value should not be considered reasonable. This loss must be minimised if the objective is to enhance the level of municipal services. This is not to say that the property tax in general is incapable of raising additional revenue. What is being said is that any source of revenue leakage making sizable in-roads into revenue productivity should be kept under reasonable limits.

TABLE 5 FISCAL SIGNIFICANCE OF PROPERTY TAX (1979)

(Per cent)

Country	PT	PT	LGE	LGE	PT
	GDP	TE	TE	GDP	LGE
Australia	1.06	2.51	5.15	2.18	48.70
Denmark	1.43	2.02	46.95	33.29	4.29
France	n.a.	n.a.	16.02	7.40	n.a.
Germany	4.54	0.89	17.96	9.21	4.93
Ireland	1.29	2.06	26.59	16.59	7.77
Netherlands	n.a.	n.a.	25.59	18.03	n.a.
New Zealand	1.84	4.57	13.05	5.25	35.06
Spain	0.15	0.52	7.80	2.20	6.73
Sweden	n.a.	n.a.	39.98	26.57	n.a.
Switzerland	0.75	1.71	22.37	9.76	7.66
United Kingdom	3.55	6.84	26.88	13.95	25.45
United States	2.76	7.19	21.25	8.16	33.82
India	0.13	0.66	4.69	0.93	14.07

PT=Property Tax, GDP=Gross Domestic Product, TE=Total Expenditure, LGE=Local Government Expenditure, n.a.=Not Available.

SOURCE: Government Finance Statistics Year Book (1985) and The World Tables (1984).

CONCLUSION AND POLICY IMPLICATIONS

The magnitude of loss of tax base due to complete and partial exemptions has been found to be lower in India than that in many advanced countries. However, it has been argued that considering the level of municipal services, the magnitude of loss whatsoever needs to be reduced. Even in countries which have higher level of services, the general feeling is that blanket exemptions should be avoided. For example, in the case of places of public worship, etc., reliefs are limited up to certain acres of land and value of property. Further, the current thinking also suggests that Central and State governments should compensate the local bodies for the loss of revenue. In this background an attempt is made here to suggest a few modifications in the existing exemptions structure in India.

With the rising cost of providing municipal services due to inflation and relative scarcity of inputs that go into the production of these services, all categories of service users including government, should contribute to the activities of municipal governments. However, government hospitals, religious, and charitable institutions need lenient tax treatment. These are institutions which provide services for the society at large. If there is a tax on them, it is likely to reduce the quantum of services available to the society through reduction in their expenditures. With this in background, the Centre and State governments should pay besides service charge, a part of the tax which may not necessarily be at

par with private properties. It can be charged in the form of a consolidated service charge. This will provide a built-in mechanism for local governments to get a regular flow of funds in the form of tax transfers. This will be a better model than what is existing now which is characterised by ad hoc transfers by higher level governments.

As regards other organisations which deserve lenient tax treatment, there is no sweeping justification for not paying tax and service charges. Over time, these institutions have grown as business and commercial entities. Blanket exemption of their properties cannot therefore, be justified on the ground of charity. Hence, a case for taxing them also. On efficiency ground, it would reduce inefficient use of the scarce resources and would avoid wastage which results from zero or low pricing. Thus, it goes beyond saying that properties owned by religious, charitable and educational institutions should be required to pay property tax in addition to service charges. However, it is also a fact that not all such organisations have grown as business entities. Therefore, organisations which devote their activities to business purposes also, should be asked to pay both tax and service charges. Organisations which are engaged only in charitable activities should be required to pay only service charges.

Treatment of embassies needs a fresh look. Urban Local bodies in Delhi and some of the metropolitan cities have devoted a good deal of their expenditures on the development and maintenance of high quality civic services for embassies. Taxation of properties and collection of service charges in respect of embassies are governed by international practices in general and Government of India rules in particular. It may be advisable to allow local bodies to recover service charges from embassies. If not, then there is a strong case for compensating urban local bodies for this loss of service charges. In other words, the Government of India should, in some way, share local government expenditure responsibility being incurred specially for these areas.

Exemption of owner occupants needs separate treatment. As owner-occupants have not thrown open their structures for earning rents or profits in the market, there is a case for lower tax burden on them.¹¹ Besides this, another argument in favour of granting relief to owner-occupancy is that, shelter being an essential commodity, house ownership should be encouraged. The arguments against granting such a relief can be based on both theoretical and administrative grounds. If tenants and owner-occupants are treated as consumers of housing services, a given proportion of their income should be spent on it. If one is staying in his

¹¹Argument in this section is based on the work by Chelliah and Shyam Nath, *Property Tax System in Delhi*, National Institute of Public Finance and Policy, New Delhi (Mimeo), 1984.

own house, he is utilising the house service to the tune of potential rental of that structure. If rebate is granted to owner-occupants by which they are made to spend a lower proportion of their income on rents, it would generate inter-personal inequity. For many of the owner-occupants who are in the higher income groups, this relief may amount to be substantial. At the same time, it would also cause inefficient allocation of resources as between the investment in housing for consumption and in housing for earning rental income. On administrative grounds, this scheme may not seem sound because it might become a constant source of revenue leakage through misreporting of facts about occupancy.

The basic argument in favour of granting relief to some needy taxpayers is that since they have not used their structures for earning income in an inflationary market, it may not be reasonable to impute rising rents to them. It should be made abundantly clear that such allowances should be limited only to residential properties and that too occupied by owners. Relief should be given in the form of rebate on rateable value, say to the extent of 25 to 30 per cent, so that changes in the rate structure do not disturb the extent of relative relief given.

Lastly, most of the low rateable value houses (low cost houses) are generally given relief from the tax, though this general exemption limit varies from state to state. These reliefs can be retained on the administrative grounds. The cost of collection may exceed the revenue yield if all the low cost (low rateable value) houses are taxed. On the whole, the tax base loss due to these reliefs is likely to overcompensate for the loss of revenue because of more effective treatment of the high value properties.

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*Morphology of Urbanization in Andhra Pradesh**

M. KOTESWARA RAO

THERE CAN hardly be a single definition of the concept of 'Urbanization' which could be acceptable or applicable to all situations. It is a complex process affecting changes in socio-economic and cultural parameters and relationships. Urbanization connotes behavioural pattern of the population and signifies the development of non-agricultural functions such as manufacturing, trade and commerce, and services; induces migration from rural to urban areas and creates environment conducive for innovation and spread of technology. Therefore, it is an over simplification to interpret urbanization merely as an increase in the population living in the urban settlements and multiplication of such areas as it is usually interpreted by demographers. Scholars from different disciplines have tried to study the phenomenon of urbanization from various angles relevant to their disciplines and have given different definitions.

According to Louis Wirth¹ 'it is a way of life'. He identified population size, density and heterogeneity as the basic determinants of urbanism. Milos Macure², a demographer, has identified it simply in terms of size of the place. Other demographers have preferred an economic or sociological concept in terms of workers engaged in non-agricultural pursuits or socio-cultural folk-urban distribution.³ Others have rejected the rural-urban dichotomy approach and have advanced the concept of rural-urban continuum.⁴ Some others have rejected all these definitions

*The present article is based on the Doctoral Dissertation of the Author submitted to the Andhra University, Waltair.

¹Louis Wirth, *Urbanism as a way of Life and Social Policy*, University of Chicago Press, Chicago, 1956.

²Milos Macure, "The Influence of the Definition of Urban Place on the Size of Population", P. Jack Gibbs (ed.), *Urban Research Methods*, D. Van Nostrand Company Inc., Delhi, 1961, pp. 21-31.

³T. Charles Stewart Jr., "The Urban-Rural Dichotomy: Concepts and Uses", *American Journal of Sociology*, Vol. 2, No. 2, 1958.

⁴Richard Dewey, "Rural-Urban Continuum: But Reality Unimportant", *American Journal of Sociology*, Vol. 66, No. 1, 1960, pp. 63-64.

on the ground that rural-urban distribution is out-moded in some industrial countries because the population is already urbanised.⁵ To overcome all these controversies, Eldridge⁶ defines "Urbanisation as a process of concentration of population and multiplication of points of such concentration". Thus she rejects many of the quantitative definitions discussed above. Most demographic studies of urbanization adopt this definition.⁷

Just as there are a variety of definitions of urbanization, so also there are different criteria for classifying a settlement as urban. For example, in Sri Lanka, all municipalities, Urban Council area and local board areas are treated as urban areas. In China, a settlement to be identified as urban requires a minimum population of 2,000 of which not less than 50 per cent or more must be in non-agricultural occupations, where as in Japan, the minimum population requirement is set at 30,000.⁸ In South Korea, all incorporated cities of 40,000 or more inhabitants are classified as urban. On the other hand, in the Federation of Malaya and in Singapore, all settlements with 1,000 or more population are designated as urban areas. This shows that different types of settlements would get classified as urban places depending on the criteria applied.

In India, the Census definition of an urban area has remained more or less unchanged for five decades from 1901-51.⁹ During this period, a town was defined as : (1) every municipality of whatever size, (2) all civil lines not included within the municipal limits, (3) every other continuous collection of house, permanently inhabited by not less than 5,000 persons, which the Provincial Superintendent of Census may decide to treat as a town for Census purposes.¹⁰ To avoid the anomalies included in the above definition, Indian Census adopted relatively strict and comprehensive definition in 1961. Since then there has been no change in this definition. The key ideas underlying the present definition of an urban area are: (1) high density of population, and (2) dominance of non-agricultural pursuits.¹¹ The Census combines these two ideas and

⁵S. Shyrock Henry and Jacob Siegal, *Methods and Materials of Demography*, US Department of Commerce, Washington DC, 1971, pp. 156-60.

⁶T. Eldridge Hope, "The Process of Urbanisation" in J.J. Spengler and O.D. Duncan, *et al* (eds.), *Demographic Analysis*, Glencoe, III, 1956, pp. 338-348.

⁷For a detailed discussion on definition of the concept of urbanisation, see V. Pothana, *Urban Growth in Andhra Pradesh*, unpublished Ph.D. thesis, Andhra University, Waltair, 1979.

⁸P. Jack Gibbs, "Some Demographic Characteristics of Urbanization" in self edited *Urban Research Methods*, *op. cit.*

⁹Asish Bose analysed in the conceptual problems in defining urban areas and its implementation from the earliest Censuses. See Asish Bose, *Studies in India's Urbanization 1901-2001*, Tata McGraw Hill, Bombay, 1974.

¹⁰*Census of India, 1901.*

¹¹*Census of India, 1961.*

define urban areas as those with:

- (a) either a municipality, corporation, contonment board, notified town area committee, etc., or
- (b) (i) a minimum population of 5,000;
(ii) a density of at least 400 people per sq. km.; and
(iii) at least 75 per cent of their male labour force in non-agricultural occupations.

On the basis of the Census data especially for 1961-81, an attempt is made in this article to analyse the trends in urbanization and Urban growth. This article is organised into two sections. Section I presents the analysis of trends in patterns of urbanization and urban growth in Andhra Pradesh at the aggregate level, while Section II gives the analysis of the patterns of urban growth at the district level.

I

TRENDS IN PATTERNS OF URBANIZATION AND URBAN GROWTH

Urbanization Record Since 1901

According to the Provisional Population Results of 1981 Census, the State of Andhra Pradesh contains 12.46 million of urban population in 234 towns of different size classes, ranging in population from less than 5,000 to more than 25 lakh, which accounts for 23.39 per cent of the total population. The number of towns of different size classes, and the aggregate population in each of these size classes of towns and cities are presented in Table 1. For the sake of convenience, class I towns having more than 1,00,000 population, are called as 'cities'; Class II and Class III as 'medium towns'; and Class IV, V and VI having less than 20,000 population as 'small towns'.

The data according to 1981 Census show that the urban population is unevenly distributed among different size-class of towns and cities. More than 50 per cent of urban population is concentrated in about 9 per cent of cities. In contrast to this, 41 per cent of small towns together account for only 9 per cent of total urban population. The medium towns which account for about 50 per cent of the total towns, contain 37 per cent of the total urban population. These results do indicate that the distribution of urban population in Andhra Pradesh, according to 1981 Census, is top-heavy. Therefore, it is interesting to examine the pattern of urbanization and urban growth for the period 1901-81.

For the purpose of analysis, urbanization can be measured in a number of different ways. The *first* is to examine the changes in the levels of urbanization, *i.e.*, the proportion of population living in urban

areas to total population and this is being termed as the "degree of urbanization". A *second* measure is the 'Urban-Rural Growth Differential' (URGD), which gives a good sense of the magnitude of the rural-urban transformation that is presently taking place. It is the difference between the rates of annual population growth between urban and rural areas. A *third* measure of urbanization is the share of net-migration in the total growth in urban population. This, of course, is a direct measure of the transfer of population from rural to urban areas. The *fourth* measure is the growth of urban population itself. Since the detailed migration Tables of 1981 Census are yet to be published, the first, second and fourth measures are applied to study the broad trends of urbanization in Andhra Pradesh. The details of population relevant for the present purpose have been computed and are presented in Table 2. Col. (5) of Table 2 gives the proportion of urban to total population; Cols. (6) and (7) give the annual rates of growth of rural and urban population and Col. (8) presents the urban-rural growth differential (URGD) for the period 1901-81.

TABLE 1 URBAN POPULATION OF ANDHRA PRADESH, 1981

<i>Size</i>	<i>Class of Town</i>	<i>Number of towns</i>	<i>Percentage of total towns</i>	<i>Population (ooo's)</i>	<i>Per cent of total urban population</i>
(1)	(2)	(3)	(4)	(5)	(6)
I	1,00,000 and above	20	8.55	6,688	53.69
II	50,000—99,999	30	12.81	2,014	16.17
III	20,000—49,999	88	37.18	2,610	20.95
IV	10,000—19,999	64	27.78	912	7.32
V	5,000—9,999	28	11.97	218	1.75
VI	Below 5,000	4	1.71	15	0.12
TOTAL		234*	100.00	12,457	100.00

*This number includes 17 towns which are included in the four Urban Agglomerations.

SOURCE: *Census of India, 1981*, Provisional Population Totals, Andhra Pradesh, Series 2, Paper of Supplement, Table 3, p. 65.

At the beginning of the century, the level of urbanization in Andhra Pradesh was around 10 per cent only. It rose to about 23 per cent by 1981 [Col. (5)]. In other words, the degree of urbanization has more than doubled in a period of eight decades. The table indicates that the pace of urbanization accelerated regularly from the turn of the century

TABLE 2 SOME KEY STATISTICS ON URBANISATION IN ANDHRA PRADESH, 1901-81

Census Year	Number of Towns	Total Urban Population	Population in Towns above 20,000 (in million)	Level of Urbanisation	Annual Growth rate of Urban Population (per cent per year)	Annual Growth rate of rural Population (per cent per year)	U.R.G.D. (col. 6- col. 7)	Annual Growth rate of town Population in towns above 20,000 (per cent per year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1901	116	18.4	8.2	9.55	—	—	—	—
1911	113	21.7	10.0	9.68	1.66	1.33	0.53	2.00
1921	153	21.9	9.9	9.75	0.89	-0.02	0.11	-0.10
1931	176	26.9	12.8	10.39	2.08	1.13	0.95	2.60
1941	312	36.7	20.1	12.44	3.16	0.94	2.22	4.62
1951	291	54.2	33.6	15.82	3.98	6.84	3.14	5.27
1961	212	62.7	46.8	17.43	1.47	1.46	0.01	3.37
1971	207	84.0	69.4	19.31	2.97	1.68	1.28	4.02
1981	234	124.6	113.3	23.39	4.05	1.59	2.46	5.02

SOURCE : Census of India, 1971, General Population Tables Part II A, Series 2, Andhra Pradesh.

Census of India, 1981, Provisional Population Totals, Andhra Pradesh, Series 2, Paper 1 of Supplement.

until 1951. It then decreased in 1951-1961 decade,¹² (Col. 6). The later Census shows an acceleration once again. Even though the picture revealed by different measures is broadly similar, there are some differences between the measures which need to be emphasised. As there are large variations in the rates of growth of the rural population between the decades, the URGD measure (Col. 8) also shows large variations between the decades.

According to this measure, the pace of urbanization was higher in the decade 1941-51 than in all the others. The acceleration in urbanization that has occurred in the past decades is also brought out much more sharply by this measure: 2.47 for 1971-81 as compared with 1.28 for 1961-71 and 0.01 for 1951-61. This slowing down of urbanization during 1951-61 may be on account of the declassification of revised definition to identify settlements as urban localities.

It may be recalled that the definition of urban areas has been systematised since 1961 Census. Even then, it suffers from an element of arbitrariness. This is more severe in the case of identification of villages as urban areas at the lower end and it necessarily involves personal judgement. As the urban character of bigger towns and cities are easily recognisable, the rate of growth of population of cities and medium towns (Class I, II and III towns) are computed and are presented in Col. (9) of table 2. Again, the picture is broadly similar to that of the usual definition. The annual rate of growth of population in the medium towns and cities are relatively higher when compared to the annual rates of growth of urban population of all towns (Col. 6). Further, it is evident from the table that the total urban population (Col. 3) has increased seven fold between 1901-1981, while the number of urban settlements (Col. 5) only doubled. This shows that growth of urban population was not so much due to the addition of new towns as it is due to the enlargement of existing towns at every level.¹³ In other words, the urban growth that is being experienced in Andhra Pradesh could be

¹²Due to the application of the new definition to identify the urban localities at 1961 census, 79 towns of 1951 were declassified as rural areas. These 79 towns accounted for a little over 5,00,000 population which formed 9 per cent of the total population in 1951. Further, the slow growth may be due to plague epidemic of 1918. The plague epidemic in 1911 led to a mass exodus from a large number of towns. See A.V. Rama Rao, *Economic Development of Andhra Pradesh, 1765-1957*, Popular Book Depot, Bombay, 1958, p. 167.

¹³This process is described in some studies as 'accretion' and in others, as "intensive component". See, for example, Rakesh Mohan and Chandra Sekhar Pant, "Morphology of Urbanisation in India", *Economic and Political Weekly*, Vol. 17, No. 38-39, September, 1982, pp. 1534-1540 and 1579-1588; K. Nagaraj, *Towns in Tamil Nadu, Karnataka and Andhra Pradesh: A Study of Population and Configuration, 1961-81*, Madras Institute of Development Studies, Madras, 1985.

ascribed largely to rural-urban migration to existing towns and cities and marginally to the emergence of new towns.

PACE OF URBAN GROWTH

Having analysed the trends in urbanization, it is appropriate, at this stage, to examine the pace of urban growth during the period 1901-1981. This is being examined, broadly, in relation to: (1) growth of towns by size-classes, and (2) growth of population in different size-class of towns and cities.

Growth of Towns

The number of towns of different size-classes, for the period 1901-81, has been presented in Table 3. The Table indicates, that the number of towns has almost doubled during this period. In 1901, there were 116 towns, and the number rose to 234 by 1981. There was only one city till 1941, namely Hyderabad. Since 1951, the number of cities increased and by 1981 the number rose to 20. The group of medium towns increased by about ten fold during the period 1901-81, i.e., from 11 in 1901 to 117 by 1981. Within this group of towns, class II towns (towns having population 50,000 to 1,00,000) have increased by thirty times, while class III towns, (Towns having population of 20,000 to 50,000) have increased by only eight times. During the same period, the small towns have registered a decline in their number from 104 in 1901 to

TABLE 3 NUMBER OF TOWNS IN ANDHRA PRADESH IN EACH SIZE-CLASS 1901-81

Year	Cities	Medium Towns			Small Towns				Total
		II	III	(II+III)	IV	V	VI	(IV+V+VI)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1901	1	—	11	11	44	60	—	104	116
1911	1	1	12	13	45	70	4	119	133
1921	1	2	13	15	46	76	15	137	153
1931	1	8	11	19	57	78	21	156	176
1941	1	10	21	31	55	121	4	160	212
1951	6	10	34	44	70	80	2	152	202*
1961	11	8	51	59	71	70	1	142	212
1971	13	17	59	76	76	38	4	118	207
1981	20	30	87	117	65	28	4	97	234

*Towns of 1981 which are declassified as urban in 1961 were excluded.

SOURCE: As noted *ante* (Table 2)

97 by 1981. Within this group, the class IV towns (having population 10,000 to 20,000) are better placed. They have increased by one and half times, from 44 in 1901 to 64 by 1981; while class V towns (having population of 5,000 to 10,000), have registered a sharp decline from as high as 60 in 1901 to as low as 28 by 1981.

Differential Pace of Urban Growth

It would be of interest to know the distribution of urban population by size-class of towns for the entire period 1901-81. The proportion of population, size-wise for all the decades has been computed and presented in Table 4.

TABLE 4 PERCENTAGE OF URBAN POPULATION BY SIZE-CLASS
IN ANDHRA PRADESH, 1901-81

Year	Cities	Medium Towns		Total Medium Towns (II+III)	Small Towns			Total Small Towns (IV + V + VI)
		II	III		IV	V	VI	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1901	24.38	—	20.58	20.58	31.40	23.64	—	55.04
1911	23.12	2.50	11.85	22.36	29.23	24.58	0.72	54.53
1921	18.48	4.90	20.47	25.37	27.99	25.47	2.70	56.15
1931	17.32	18.15	12.16	30.30	28.77	20.60	3.02	52.38
1941	20.16	19.50	15.16	34.65	20.82	23.61	0.47	45.19
1951	34.90	14.03	18.43	32.64	19.78	12.13	0.73	32.64
1961	42.67	8.48	24.23	32.71	15.81	8.74	0.07	24.62
1971	48.35	13.35	20.92	34.27	13.40	3.79	0.19	17.38
1981	53.69	16.17	20.95	37.12	7.32	1.75	0.12	9.19

SOURCE: As noted *ante* (Table 2).

It is evident from the data presented in Table 4 that the proportion of population in cities has increased by more than two times, i.e., from about 25 per cent in 1901 to a little more than 50 per cent by 1981. In contrast to this, the small towns have experienced a marked decline in the proportion of population throughout the period 1901-81. The increase in the proportion of population in medium towns during the period is moderate. A closer examination of the group of medium towns shows that the class III towns within this group have experienced almost stagnation in the growth of population; while class II towns have registered a sharp increase in the proportion of population from a mere three per cent in 1961 to 16 per cent by 1981. On the whole, the data indicates the intensity of spatial concentration of population in

cities and medium towns.¹⁴ This lends support to the oft quoted proposition that the increasing proportion of population can be considered as an indication of the increasing dysfunctional or lopsided nature of the size distribution of urban areas.¹⁵ In other words, the growth of an urban area depends on the size of its population; larger the size, higher the rate of growth of population.

Two approaches are commonly used to measure urban growth. They are known as 'Instantaneous' and 'Continuous' approaches. The former method ascertains population in all urban sizes at each Census point, traces the changes in each class of towns regardless of cities and towns that make it up. The latter method classifies towns according to the population at the population at a point of time and measures over time changes in the various classes of towns without changing the composition of classes. It can be applied either separately and to a much longer period. Each method answers a different question. The first shows what is happening to the population in terms of its distribution by size of city. The second method shows what is happening to the specific cities and towns as a result of their initial size differences.¹⁶ These two methods have been applied to examine the relationships between the size and the growth of towns and cities in the state for the period 1961-81, for the reason that the definition of an urban area, as discussed earlier, has been systematised since 1961 Census onwards and as such the data are comparable.

The growth rates (per cent per year) by size-classes of urban areas based on the instantaneous method are presented in Table 5 for the periods 1961-71 and 1971-81. Similarly, the results of the continuous method for the same period are presented in Table 6. The results of the growth rates obtained through instantaneous method (table 5) shows that towns and cities with a population of 50,000 and above are growing faster than the small towns, and the latter, have suffered and declined as a result. This phenomenon is more marked during the period 1971-81. But this method suffers from serious limitations when used for comparing growth of different size-groups of towns and cities between two Censuses.

¹⁴It is observed that the rates of urban growth during the decade 1961-71 were closely associated with the developments in the agricultural sector than the developments in the industrial sector. See V. Pothana, *op. cit.*, p. 143.

¹⁵For example, some studies on urban growth in India have concluded that the growth of an urban area depends on the size of its population. See K. Davis, *Population of India and Pakistan*, Princeton University Press, Princeton, 1951.

¹⁶A.R. Weber, *The Growth of Cities in Nineteenth Century*, MacMillan, New York, 1899, pp. 72-73 and 83-99. See also K. Davis and Ana Caris, "Urbanization in Latin America" *Milbank Memorial Fund Quarterly*, Vol. 25, 1946; and P. Jack Gibbs, "Some Demographic Characteristics of Urbanization" in P. Jack Gibbs (ed.), *Urban Research Methods*, *op. cit.*

It may be observed that: (1) the number of cities in each size-class changes between Censuses; and (2) that in the highest size-class (class I cities), no city devolves out of it, while many graduate into it. Thus, in comparing growth rates of any size-class of towns and cities across decades; we are in effect comparing non-comparable entities. For example, the growth rate of urban population computed for cities in between the population of 20 cities in 1981 and the population of 13 cities in 1971 will, naturally, be high. Similarly, for each of the lower size-classes, some towns graduate into it and some devolve out into next higher classes. The new addition to the lower size-classes area is the bottom of the population range and hence adds much less to the class than is lost by the graduation of towns to upper size-classes.

TABLE 5 GROWTH RATE OF URBAN POPULATION BY SIZE-CLASS
IN ANDHRA PRADESH: 1961-71 AND 1971-81
(INSTANTANIOUS METHOD)

Size-Class	Per cent Population in Each Size-Class			Growth Rate (per cent per year)	
	1961*	1971*	1981*	1961-71	1971-81
(1)	(2)	(3)	(4)	(5)	(6)
I	42.67 (11)	48.35 (13)	53.69 (20)	4.41	5.15
II	8.48 (8)	13.35 (17)	16.17 (30)	7.73	6.04
III	24.23 (51)	20.92 (59)	20.95 (87)	1.54	3.99
IV	15.81 (71)	13.40 (76)	7.32 (65)	1.20	-1.91
V	8.74 (70)	3.79 (38)	1.75 (28)	-5.06	-3.79
VI	0.07	0.19	0.12	14.92	-0.41
TOTAL	100 (212)	100 (207)	100 (234)	2.97	4.05
Total Urban Population in Lakh	62.7	84.0	124.9	—	—

SOURCE: As noted *ante* (Table 2).

*Figures in brackets are the number of Towns in each class.

To overcome this deficiency continuous method is used separately for two decades, *i.e.*, for the period 1961-71 and 1971-81. For the period 1961-71, the initial size-class of towns and cities has been fixed in 1961. and, for the period 1971-81, the size-class has

been fixed in 1971. Growth rates (per cent per year) are computed for comparing the total population of towns and cities in each class in 1961 with the total population of the same towns and cities in 1971 irrespective of their classification in 1971. Same procedure is adopted for the decade 1971-81. The results are presented in Table 6.

In classes IV and V, one town each were declassified in 1971 and 1981. Yet, this non-conclusion would not alter the results appreciably. It is evident from the Table that the picture emerging is quite different from that of instantaneous method. For example, the growth rate obtained through instantaneous method (Table 5) is negative for the small towns while it is positive in the case of continuous method. The difference between growth rate of classes I and IV is only marginal. It is clear from the results, that no generalisation can be made on the trends of urban growth for different size-classes of towns and cities. With regard to the period 1961-71, six towns in class IV and 29 towns in class V were declassified at 1971 Census. Even then the rates of growth of these classes of towns are more than the Class II towns. The picture emerging for the period 1961-71 also conforms broadly to the results for the period 1971-81. Therefore, it could be said, that the growth rates obtained by this method give a realistic picture.

The results of this exercise do indicate that the growth of towns and cities is related not so much to the size of towns as to the economic character.¹⁷ However, there has been no acceleration in the overall rates of growth of population in each size-class between each of the Censuses since 1901.

II

DISTRICT-WISE PATTERN OF URBAN GROWTH

Patterns of Urbanization

For a better understanding of the process of urbanisation in Andhra Pradesh, it is necessary to disaggregate the trends in urbanization at district level. Urbanization rates have been calculated for all 23 districts¹⁸, and are presented in Table 7. Cols. 3-5 give levels of urbanisation for periods 1961, 1971 and 1981 whereas Cols. 6-9 give, the proportions of urban population for a more restrictive definition of urbanization, i.e., proportion of urban population in towns having 20,000 and

¹⁷K.B. Suri, "Town Size, Economic Structure and Growth", *Economic and Political Weekly*, 3, August 10, 1968, pp. 1247-51.

¹⁸In 1971 Census, there were 21 districts; by 1981, two more districts, i.e., Vijayanagaram and Rangareddy are carved out. The former is formed out of Visakhapatnam and Srikakulam districts in June 1979, and the latter is formed out of erstwhile Hyderabad district on 15th August, 1978.

TABLE 6 GROWTH RATE OF URBAN POPULATION BY SIZE CLASS IN ANDHRA PRADESH, 1961-71 AND 1971-81
(CONTINUOUS METHOD)

Size- Class	Number of Towns in 1961	Population (in 000's)		Number of Towns in 1971	Population (in 000's)		Growth Rate 1961-71		Growth Rate 1971-81	
		1961	1971		1971	1981	per cent per year	per cent over decade	per cent per year	per cent over decade
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I	11	2719	3871	13	4063	5942	3.59	42.34	3.87	46.24
II	8	532	633	17	1121	1621	1.75	18.94	3.75	44.58
III	51	1491	2568	59	1757	2558	5.58	68.86	3.82	45.55
IV	71	911	1191	76	1127	1631	2.63	29.66	3.76	44.81
V	70	324	425	38	318	417	2.56	28.86	2.75	31.25
VI	1	4	Declassified	4	15	18	—	—	1.83	18.55
TOTAL	212	5,981	8,678	207	8,401	12,187	3.79	45.08	3.79	45.07

SOURCE: As noted *ante* (Table 2).

TABLE 7 DEGREE OF URBANISATION IN DISTRICTS OF ANDHRA PRADESH, 1961-81

Districts	Urban Population (in '000s)	Degrees of Urbanisation in all towns and cities			Degree of Urbanisation in towns with 20,000 and above population		
		1961	1971	1981	1961	1971	1981
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Srikakulam	217	7.02 (23)	9.25 (19)	11.20 (22)	2.26 (21)	2.54 (21)	4.65 (22)
2. Vizianagaram	290	11.56 (14)	13.85 (13)	15.88 (16)	10.90 (10)	11.23 (12)	12.35 (17)
3. Visakhapatnam	796	19.60 (4)	25.43 (3)	31.95 (3)	16.85 (4)	20.65 (4)	30.01 (2)
4. East Godavari	822	18.54 (6)	19.23 (6)	22.20 (6)	14.86 (6)	18.00 (5)	20.80 (6)
5. West Godavari	595	15.87 (8)	17.71 (8)	20.89 (7)	13.30 (7)	16.30 (7)	20.29 (7)
6. Krishna	994	23.51 (2)	27.25 (2)	32.64 (2)	18.32 (2)	22.55 (2)	29.99 (3)
7. Guntur	946	20.82 (3)	24.98 (4)	27.60 (3)	17.99 (3)	22.40 (3)	26.68 (4)
8. Prakasam	349	10.40 (17)	11.07 (17)	14.20 (18)	5.18 (17)	6.77 (17)	11.24 (18)
9. Nellore	417	10.99 (16)	15.99 (9)	20.89 (8)	10.93 (9)	12.10 (9)	19.58 (8)
10. Chittoor	462	11.45 (15)	13.57 (15)	16.84 (15)	7.05 (16)	8.82 (16)	13.79 (15)
11. Cuddapah	374	13.20 (12)	14.18 (12)	19.42 (10)	7.53 (15)	11.49 (11)	15.22 (14)
12. Anantapur	530	17.41 (7)	17.77 (7)	20.77 (9)	12.90 (8)	15.78 (8)	19.16 (9)
13. Kurnool	590	19.23 (5)	20.30 (5)	24.52 (5)	14.95 (5)	16.94 (6)	22.70 (5)
14. Mahbubnagar	267	10.04 (18)	8.98 (20)	10.93 (23)	3.60 (19)	4.93 (19)	7.15 (21)
15. Rangareddy	379	8.89 (20)	8.04 (22)	14.15 (19)	—	2.17 (22)	2.93 (23)
16. Hyderabad	2241	100.00 (1)	98.92 (1)	99.98 (1)	100.00 (1)	98.92 (1)	100.00 (1)
17. Medak	216	7.73 (21)	8.51 (21)	11.84 (20)	—	1.79 (23)	9.50 (19)
18. Nizamabad	324	14.52 (10)	15.95 (10)	19.22 (12)	10.84 (11)	11.68 (10)	17.30 (10)

Continued

Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
19. Adilabad	317	15.49 (9)	15.92 (11)	19.38 (11)	8.18 (14)	11.13 (13)	16.73 (11)
20. Karimnagar	383	7.06 (22)	10.72 (18)	15.78 (17)	3.23 (20)	6.42 (18)	13.12 (16)
21. Warangal	397	14.09 (11)	13.43 (16)	17.24 (13)	10.28 (12)	11.10 (14)	16.60 (12)
22. Khammam	293	12.13 (13)	13.59 (14)	17.02 (14)	9.99 (13)	9.67 (15)	16.13 (13)
23. Nalgonda	259	9.30 (19)	6.69 2(3)	11.40 (22)	5.13 (18)	4.23 (20)	8.86 (20)
ANDHRA PRADESH		17.44	19.33	23.33	13.22	16.00	21.10

Figures in the brackets are ranks of districts.

Source: As noted *ante* (Table 2).

above population. It should be said at the outset, that the variation in the levels of urbanization among the districts is very large. For example, according to 1981 Census, it ranges from 11 per cent in the district of Srikakulam to 69 per cent in Hyderabad district.

It is evident from the data that five out of 23 districts stand out prominently as highly urbanised when compared with the state's average for the period under consideration. There are the districts of Hyderabad, Visakhapatnam, Krishna, Guntur and Kurnool. In 1981, for example, the combined urban population of these five districts comprise about 45 per cent of the total urban population of Andhra Pradesh. By itself, Hyderabad district contains 2.24 million urban dwellers, which accounts for 18 per cent of the total urban population of the state and 69 per cent of the total population of the district. Similarly, Visakhapatnam district urban population accounts for 32 per cent of its total inhabitants, while, the Kurnool district urban population accounts for just a little over the state's average, that is, about 25 per cent. The data for the earlier decades, *i.e.*, 1961 and 1971 also confirm that those five districts have registered higher proportions of urban population over the state's average.

Even when the restrictive definition of urbanization is considered—urbanization in towns and cities having a population of 20,000 and above—the same five districts maintain their prominent position in terms of having higher proportion of urban population among all the districts during the entire period under consideration. Further, it could be observed that two of the agriculturally developed districts, *i.e.*, East and West Godavari, have also registered slightly higher proportion of urban population over the state's average. But surprisingly, their proportion of urban population declined in the subsequent periods. This declining trend is more pronounced in the case of West Godavari district which needs a detailed enquiry.

Patterns of Urban Growth: 1961-71 and 1971-81

At this stage, a related aspect that needs a closer examination is the relationship between the levels of urbanization already attained and the rates of growth of urban population. For this purpose, rates of growth of urban population (per cent per year) have been calculated for all the districts for the period 1961-71 and 1971-81 for all the urban areas and towns with above 20,000 population.

It could be observed from the data, that urban growth during the decade 1971-81 has accelerated in almost all the districts over the decade 1961-71, except in the case of Srikakulam and Visianagaram. One of the striking features of the data is that the pace of urban growth has tended to decline during the decade 1971-81 in three of the most urbanised districts—Guntur, Kurnool and Hyderabad, while Krishna district has just

TABLE 8 GROWTH OF URBAN AND RURAL POPULATION, DISTRICT-WISE IN ANDHRA PRADESH, 1961-81

(Per cent Per Year)

Districts	All Towns		Towns above 20,000 only	
	1961-71	1971-81	1961-71	1971-81
(1)	(2)	(3)	(4)	(5)
1. Srikakulam	41.3	2.70	2.56	6.97
2. Vizianagaram	3.03	2.70	1.49	2.28
3. Visakhapatnam	4.55	4.70	4.14	6.05
4. East Godavari	2.72	3.22	3.77	3.32
5. West Godavari	3.14	3.57	3.97	4.13
6. Krishna	3.10	4.14	5.98	4.96
7. Guntur	3.40	3.08	4.29	3.65
8. Prakasam	2.61	5.09	4.82	7.80
9. Nellore	2.32	5.13	2.56	7.16
10. Chittoor	3.82	4.17	4.05	6.59
11. Cuddapah	3.38	5.29	6.16	4.93
12. Anantapur	3.00	3.52	4.04	4.17
13. Kurnool	3.72	3.90	3.64	3.14
14. Mahbubnagar	3.65	4.43	5.45	6.26
15. Rangareddy	10.00*	6.70	—	4.00
16. Hyderabad	3.50	-0.40†	3.50	3.70
17. Medak	3.75	5.64	—	20.77
18. Nizamabad	3.98	4.42	3.36	6.62
19. Adilabad	4.33	4.50	5.92	6.68
20. Karimnagar	6.28	6.23	9.16	9.75
21. Warangal	2.80	4.68	12.89	6.30
22. Khammam	3.78	4.81	2.30	7.83
93. Nalgonda	-0.14	7.85	-0.38	10.13
	2.96	4.03	4.00	5.02

*The highest growth rate in Rangareddy district is due to the transfer of Urban parts of Hyderabad into this district.

†Low growth rate in Hyderabad also due to transfer of area to Rangareddy.

SOURCE: As noted ante (Table 2).

maintained its rate. It is only Visakhapatnam district which has registered increasing rates of urban growth consistent with its higher levels of urbanization during the periods under consideration. This suggests a negative relationship between the level of urbanization already attained and the rate of growth of urban population.

Again a closer look at Col. (3) of Table 8 shows, that relatively backward districts—Prakasam, Nellore, Cuddapah, Mahbubnagar, Medak, Nizamabad, Adilabad, Karimnagar, Warangal, Khammam and Nalgonda—have registered a significant increase in the rate of urban growth

during the decade 1971-81. Districts such as Prakasam, Nellore, Cuddapah, Medak, Karimnagar and Nalgonda have registered more than 5 per cent (per year) urban growth during the decade 1971-81. Some of these districts have experienced lower rates of growth of rural population during the same period. As has been discussed earlier, one of the industrially developed districts, Hyderabad, and agriculturally prosperous districts West Godavari, East Godavari, Krishna and Guntur, all have recorded lowest rates. A comparison of the urban growth rates of the decade 1971-81 with that of the earlier decade 1961-71 shows more or less same results. A similar picture could be observed from the data presented in Col 4 and 5 of Table 8. This broadly suggests that in the case of more urbanised districts the contribution of rural urban migration to total urban growth is likely to be relatively small, whereas in the least urbanised districts, it plays a more prominent role. These observations largely conform to the findings at the all-India level.¹⁹

SUMMARY

The analysis of trends in urbanization and urban growth at the aggregate level of the state suggests that the pace of urbanization has regularly accelerated, except, during the decade 1951-61, which may be attributed to the declassification of 79 towns at 1961 Census. Further, the distribution of urban population by size-class of towns and cities over period show the intensity of spatial concentration of population in the medium towns and cities of Andhra Pradesh.

The analysis at the district level shows that five out of the 23 districts stand out prominently as highly urbanised when compared with the average of the state for the periods 1961, 1971 and 1981. They are the districts of Hyderabad, Visakhapatnam, Krishna, Guntur and Kurnool. An examination of urban growth rates for the periods 1961-71 and 1971-81 indicates that there has been an acceleration in the rates of urban growth in most of the districts during the period 1971-81 over the decade 1961-71 and this phenomenon is very much marked in the case of backward districts such as Prakasam, Nellore, Cuddapah, Mahbubnagar, Medak, Adilabad, Karimnagar, Warangal and Nalgonda. This suggests a shift in the spatial pattern of new urbanisation away from the traditional areas of urban growth. □

¹⁹Nigel Crook and Tim Dyson, "Urbanization in India: Results of 1981 Census", *Population and Development Review*, Vol. 8, No. 1, March 1982, pp. 145-55.

Some Issues in Management of Urban Water Supply Systems: A Case of Ahmedabad

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and

P.B. ANAND

WHETHER SEEN in the general view that water is one of the fundamental needs for human existence, or analysed in a specific view that we are just three years short of our target year by which we aim to have "water for everyone", the issue of water supply continues to nag policy makers and researchers alike. Water supply is a typical multi-dimensional issue: The existing technical know-how calls for a lumpy investment (for the creation of the system) which is difficult to mobilize; it is also an extremely spatial issue, *i.e.*, water is to be supplied at the place where a settlement exists irrespective of whether water is available there or not; any regional policy or action necessitates intervention into natural processes and therefore technologically complex, costly and environmentally risky. In spite of all these, the need for water for everyone calls for "something to be done". It is no doubt that urban areas are better off in coverage of water supply. At the beginning of Seventh Plan, about 81 per cent of urban population was already covered by water supply whereas still about a half of the rural mass is yet to be covered by such system.¹ Moreover, in urban areas, the level of water supply in terms of quantity as well as quality will easily out do the water supply in rural areas. The riddle is that though, on the whole, urban water supply problem is small, each individual system involves considerable size and complexity that from management perspective calls for more organized efforts.

With this background, our objective in this article is to examine and

*Acknowledgements are due to officials of Ahmedabad Municipal Corporation for their help.

¹*The Seventh Five Year Plan*, Planning Commission, Government of India, New Delhi, 1985, pp. 301.

outline some issues in urban water supply management through a case study of Ahmedabad. A problem such as this, can easily be studied for years because there are myriad factors that are related to water supply; right from catchment basin characteristics and river hydrology to meteorology; and right from pipe length and diameter to investment, costs and pricing. We, however, restrict ourselves to examination of barely a few factors that have been perceived to have affected provision of water supply to average 'Amdavadi'. Just like other problems, water supply problem involves at least three perspectives in the scale of time. An elaborate examination of regional environmental issues is relevant in a long term perspective; at least a cursory examination of such factors is necessary in a medium term perspective. In a short term perspective which is more realistic, given the stringent financial situation of urban governments,² the factors to be considered are more local than global in nature. Our interest in focusing on a metropolitan city is again due to two reasons. On the whole, among urban bodies, the resource base of municipal corporations is better than those of municipalities. Even with such 'blessed' conditions large cities have still not been able to solve their water supply problem. Secondly, as Mills and Becker point out these big cities have a larger 'generic' city all around limits of the legal city and therefore the implications of short and long term planning decisions are much more significant in such a context.³

ORGANIZED EFFORTS IN PAST FOR WATER SUPPLY IN AHMEDABAD

Ahmedabad has been the largest city in the state of Gujarat and prior to Jaipur's becoming a metropolis, it was the only city for the vast umland in western India. As the city began to grow into an industrial city, the form of city government and accordingly organized efforts for water supply underwent changes.

The first phase of these efforts dates back to the period between 1850 and 1891, during which some events like building up of barrage on Sabarmati for providing water supply to the city, etc., took place. However, a 'water supply system' was not born till 1891 when the water works on the eastern bank just north of walled city at Dudheshwar was built. The system consisted of four infiltration wells in the river bed, two steam engines and pumps and twenty-seven inches distribution main, with an initial capacity of 5.46 million litres per day (MLD) at the rate of thirty-six litres per person. The water reserve capacity was increased to

²Planning Commission, *Task Forces on Housing and Urban Development-II, Financing of Urban Development*, Government of India, New Delhi, 1983; para 1.19, pp. 4.

³Edwin S. Mills, and Charles M. Becker, *Studies in Indian Urban Development*, World Bank Research Publication, Oxford University Press, New York, 1986, pp.48.

29.5 MLD in 1912. In the year 1936 the steam engines were withdrawn and electric motors and pumps were installed in the water works. By 1950, as population was two and a-half lakh and even when the water supply was raised to about ninety-one MLD, the situation continued to be grim. To ease the position, Ahmedabad Municipal Corporation (AMC) undertook a major project for augmenting the water supply which was completed by 1954.

WATER CONSUMPTION AND SUPPLY SYSTEMS IN RECENT TIMES

Water consumption depends on several factors including the social and cultural factors and others like nature of industries, technology used, etc. As Burton and Lee point out, there are evidences to "show that the demand for residential water supply is a function of accessibility to water, housing conditions, the level of income and water using habits. Accessibility to water appears to be the most significant factor influencing the level of water consumption".⁴ Along with increasing population and industrial activity, increasing accessibility, the water consumption in the city has been increasing. However, the natural factors, especially rainfall, seem to be having at least a minor effect on the consumption pattern. The details of water consumption in Ahmedabad are presented in Table 1.

A cursory examination of Table 1 reveals at least two observations:

- (i) that there seems to be some lagged relationship between the rainfall in current and previous years and water consumption rate in current year; and
- (ii) that in recent years the efforts are to stabilize consumption at about 200 litres per capita per day (lpcd).

It can also be seen that up to about ninety per cent of total filtered water supplied is consumed for domestic use (which perhaps includes home based enterprises and other small establishments in informal sector). The policy of AMC is to concentrate mainly on supply for domestic purposes with the idea that industries can make their own arrangements.

A brief digression is necessary here to examine the spatial dimensions of water supply in a bit detail. A land locked city like Ahmedabad has greater tendency to grow in a circular fashion. The core of the city is the walled city area housing several wholesale and retail commercial establishments. The city in AMC limits (with a total area of about 98 sq.

⁴Ian Burton, and T.R. Lee, "Water Supply and Economic Development: The Scale and Timing of Investment" in Leo Jakobson, and Ved Prakash, (ed.), *Metro-politan Growth: Public Policy for South and Southeast Asia*, Sage Publications, Halsted Press Division, John Wiley and Sons, New York, 1974, pp. 177-96.

TABLE 1 POPULATION, RAINFALL AND WATER SUPPLY IN AHMEDABAD FOR SELECT YEARS

Year	Population	Rainfall (in mm)	Average daily of filtered water ('000 Litres)			Per capita water supply in litres
			Domestic	Industrial	Others	
1961	11,49,918	831.3	—	—	—	182
1971	15,86,544	544.7	3,32,250	156	4,395	212
1973	17,20,000	1070.9	2,87,837	1,270	5,993	172
1975	18,38,000	1238.0	2,76,750	2,600	13,150	159
1978	20,03,000	805.4	3,06,000	2,475	29,025	168
1981	20,59,725	955.7	4,03,485	3,317	35,654	201
1983	22,91,000	1085.7	4,37,800	3,618	38,900	197
1985	23,87,938	NA	4,53,318	3,633	39,056	192

SOURCE: AMC Statistical Outline of Ahmedabad City, 1984-85, AMC Ahmedabad.

km) spreads all around this like a ripple. The eastern part of the city houses several textile industries and the low income population directly based on these industries (of total 83,800 hutments in city the more than 2/3 are in zone), whereas the western part houses more elitist development. Most of the statistics are readily available for this Ahmedabad. However outside the Municipal limits on eastern periphery, three large industrial estates with more than 5,000 industrial units and several other industries especially textile and chemical based ones, have been functioning attracting residential development. Development on the western periphery is more of institutional or residential nature. The municipal limits of AMC have been extended on east periphery to include an area of about 95 sq. km. during February 1986. The larger metropolitan area of the city is of about 310 sq. km. covering the legal city (in AMC limits), the periphery of the city (falling in several gram panchayats and nagar panchayats), in the districts of Ahmedabad and Gandhinagar.

We can classify water supply systems in a generic sense into three types:

- organized public systems (OPS) where a public body manages the water supply and each individual household has only the function of consuming water without any investment.
- organized quasi, public systems (OQPS), where a quasi-public group like a cooperative society manages the water supply and households consume but also share the investment.
- Individualized System (IS) where a household directly invests (money or energy) in collecting the water from a natural source.

Most of the out growth areas in the peripheral city (where settlement pattern is somewhat sparsely distributed clusters) have either a small OPS if the local body could afford it or an OQPS by pumping the groundwater. Therefore there is lesser probability for all these clusters to be connected to the OPS of Ahmedabad city in immediate future. With this premise we restrict our further examination to the OPS as carried out by Ahmedabad Municipal Corporation.

SOURCES OF WATER SUPPLY

Human intervention for harnessing water in the hydrological cycle is possible when precipitation (rainfall) turns into run off (surface flow) or after infiltration, (i.e., ground water).

Sabarmati river is the main source of surface water for the city. The dry weather flow of Sabarmati is generally below three cumecs (100 cusecs) and during lean years, it was noted to be as low as about 0.6 cumecs (20 cusecs). In recent years, Sabarmati has been emaciating and

even a casual observer finds that river bed is functioning as an 'open space' to accommodate activities like circus and Gujarī—the Sunday market. The river contributes about 36 to 46 MLD through the radial collector well located near Dudheshwar.

The city gets a part of its ground water from the river bed and rest from other locations. There are about 45 tubewell stations with 252 tube wells spread all over the city yielding about 300 MLD. There are 29 isolated bore wells yielding about 32 MLD. The infiltration wells in the river bed near Dudheshwar can contribute about 45 MLD in lean period and about 90 MLD in a flooding season. There are also borewells at Dudheshwar which are used mainly to pump water as and when required. The summary of water supply sources is presented in Table 2.

TABLE 2 SUMMARY OF PRESENT WATER SUPPLY BY SOURCE

<i>Detail of Source</i>	<i>Location</i>	<i>Number of Units</i>	<i>Quantum of supply in MLD</i>
1. Radial Collector well	Dudheshwar	1	36.3 to 45.5
2. Tube wells	45 stations at different locations an in the city	252	300 to 310
3. Isolated borewells		29	32
4. Infiltration wells	Dudheshwar	27	45 to 91
5. Borewells	Dudheshwar	25	As per requirement
TOTAL			About 450

SOURCE: *Collected from Water Supply Department, AMC.*

It can be visualised that ground water has been the major source of water supply for the city.

WATER DISTRIBUTION SYSTEM OF AMC.

For the purpose of distribution of water, the area in AMC limits prior to annexation is divided into three zones:

- (i) *Western Zone:* The entire area on the west of Sabarmati is supplied water from 13 tubewell stations and a few borewell stations;
- (ii) *Central Zone:* The walled city area and the area near Dudheshwar water works falling in this zone are supplied water from Dudheshwar and a few tubewell stations in the zone; and
- (iii) *Eastern Zone:* For the remaining area water is supplied from the tubewell stations in the zone.

Each tubewell station commands a certain area. However, the entire

distribution system is interconnected the supply areas for various tube-well stations and Dudheshwar water works are generally demarcated.

The distribution system is continually expanded as new developments call for water supply provisions. The details of pipe line and number of connections added and the situation thereof for select years is presented in Table 3.

It can be seen that on an average, about thirty to sixty km of pipe line is laid out in a year and about four to five thousand new connections are given.

People get access to water through any of the three possible ways:

- an unsubsidized domestic connection which conventional dwellings of middle and high income groups get where the individual can afford to pay.
- a subsidized domestic connection by which about eight hundred households in chawls and hutments get water connection at a nominal contribution of Rupees ten per household; and
- One of the 2,800 public stand posts.

About 18 per cent of the population obtains water through community water supply and public stand posts and the remaining 82 per cent of the population is served by connections. Most of these (up to 96%) are unmetered connections because the quality of water does not encourage use of meters.

The water supply is intermittent for domestic use. People get water for about three hours in the morning from six A.M. and for about an hour and a half in the evening from 5.30 P.M.

Table 3 also reveals that over the last two and a half decades, as the network gradually expanded from 560 km to 1,800 km, the coverage in terms of per capita length especially in recent years varied over a small range. Unfortunately, we do not have any standards to compare this but the TCPO study⁵ does give a scope for such comparison, no matter crude. In that study, figures of population served per km. of mains is available from which by simple inverting we can get the per capita length. It is observed that Vadodara system with a population coverage of seventy two per cent has a per capita length of 4.46 m. and Rajkot system with almost same population coverage has a per capita length of 1.15 m. It seems worthwhile to develop a set of norms (or monographs) specifying the system efficiency or costs for different per capita lengths at different levels of population coverage, for given geographical conditions (like flat or rolling terrain, etc.). Here we content

⁵Town and Country Planning Organization, *Level and Cost of Selected Municipal Services: An Empirical Study*, TCPO, Ministry of Urban Development, New Delhi, 1987, pp. 41.

TABLE 3 WATER PIPELINE LENGTH AND CONNECTIONS FOR SELECT YEARS

Year	Population	Length of Water Pipe line (km)		Length per Capita in metres (4/2)	Number of Water connections		Persons per con- nection (2/7)
		Laid in the year	At the end of the year		New in the year	At the end of the year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1961	11,49,918	36.05	560.0	0.49	2,788	65,920	17.5
1971	15,86,544	—	1,115.13	0.70	—	1,07,137	14.8
1973	17,20,000	59.24	1,226.60	0.71	6,123	1,17,788	14.6
1975	18,38,000	34.98	1,292.18	0.70	3,885	1,23,315	14.9
1978	20,03,000	58.07	1,451.08	0.72	4,859	1,33,625	15.0
1981	20,59,725	60.96	1,671.05	0.81	6,765	1,54,120	13.4
1983	22,91,000	67.68	1,761.35	0.77	5,120	1,63,571	14.0
1985	23,87,938	20.38	1,818.04	0.76	4,431	1,73,348	10.8

SOURCE: Computed from statistics in AMC, Statistical Outline of Ahmedabad City, A.M.C. Ahmedabad.

NOTE: Population figures for census, *i.e.*, 1961, 1971 and 1981 are based on census and for other years on mid year estimates available in above source.

ourselves with the proposition that per capita length is a variable to be monitored with care if the designs should not become over-awed.

In recent times "water for everyone" seems to have been misunderstood to mean water connection for every house. However, in case of AMC over the years, it is seen that user density (persons per connection) is stabilized at about 13 to 14.

FORWARD PLANNING FOR WATER SUPPLY: EFFORTS OF AMC

The 'Virtual work' principle built into the intuitive capacity of human mind, affects the human decision to opt for easiest possible solution. Historically, surface source has been the obvious choice for water supply precisely for this reason and it is interesting to note that of the 145 class I cities today, 112 cities are located in one of the 14 major river basins in the country.⁶ Though the river Sabarmati had its share in influencing the founders of Ahmedabad to favour this location, over the years, the dependence on Sabarmati is decreasing and ground water is increasingly withdrawn. As seen earlier, of the total 450 MLD of AMC's water supply for the city, about 340 MLD, (i.e., 75%) comes from ground water. Industries and textile mills also depend mainly on ground water and estimates put their withdrawal at about 90 to 110 MLD. In the absence of regular and adequate rainfall, this leads to lowering (or recession) of water table (at about 2.5 m. every year) resulting in several wells drying up. Increasing depth leads to increased cost of pumping and energy. There are also arguments that "...the river discharge... decreased significantly as the ground water drawal increased, even after good rainfall (and therefore) ... there is a close connection between the surface and ground water in this zone".⁷

The alarm call especially with the total drying up of Sabarmati in 1968, was well received and AMC decides to assess and work out a plan for water supply requirements in the city for coming decades. The result is AMC's participation along with state government in Dharoi Dam reservoir project on Sabarmati at Dharoi nearly 150 kms. upstream of Ahmedabad. The project assured AMC of 680 MLD with 100 per cent reliability. The work of preparation of project report for ancillary

⁶Nilay, Chaudhuri, "Water Quality Management in India: Problems, Approach and Areas of Investigation" Paper in B.B. Sundaresan (ed.), *Proceedings: Workshop on Research and Development Needs for Water Supply and Sanitation Decade 1981-1991*, National Environmental Engineering Research Institute, Nagpur, 1980, pp. 30.

⁷A.H. Patel, P. Sharma, K.R. Ramanathan, "Integrated Approach to the Management of Water Supply for the City of Ahmedabad and its Metropolitan Area", Paper in *Symposium on Current Trends in Arid Zone Hydrology*, Physical Research Laboratory, Ahmedabad, 1978.

works to pick up, treat and distribute water that will become available from Dharoi project was entrusted to consultants and they submitted the report by 1973.

The population of the city was projected to be 27.2 lakh in 1991; 30.00 lakh by 1995 and 34.00 lakh by 2,001. The per capita consumption was projected to increase gradually from 191 LPCD in 1991 to 195 LPCD in 1995 and to 209 LPCD by 2001. The total water demand for domestic as well as other purposes and leakages. The details of this projection are shown in Table 4.

TABLE 4 WATER DEMAND IN AHMEDABAD BY PURPOSE (IN MLD)

Purpose Year	1971	1981	1991	2001
1. Domestic	223.0	376.6	527.8	716.7
2. Commercial and Industrial	23.4	44.3	61.7	80.5
3. Public	22.4	52.7	80.2	120.0
Total of 1,2,3	268.8	473.6	669.7	917.2
4. Leakages	26.9 (10%)	94.7 (20%)	100.5 (15%)	137.6 (15%)
TOTAL DEMAND	295.7	568.3	770.2	1054.8
ROUNDED UP	296	568	770	1055

SOURCE: Water Supply Department, AMC.

Based on these projections, the demand for the year 1995 works out to 887 MLD and the plan was to meet this demand in a 'conjunctive' manner. The quantum of water to be drawn by source is:

(i) Surface source (Dharoi Reservoir)+drawal from the 4 radial collector wells	682 MLD
(ii) Infiltration wells in river bed	48 MLD
(iii) Tube wells	159 MLD
TOTAL	889 MLD

This implies an emphasised dependence on surface source and bringing down the ground water drawal to about half the present drawal of (more than 340 MLD). To pick up the water from Dharoi reservoir it was proposed to construct a water works and treatment plant at Kotarpur in the northern part of the city. Ahmedabad has been divided into 26 water supply zones and after required treatment, the water will be pumped to zonal underground reservoirs. It will be again pumped to overhead floating reservoirs from which water will flow by gravity to the users.

The financial estimates in 1973 put the total project cost at Rs. 31 crore which was surely a capital requirement beyond AMC's means and therefore some arrangements for raising the resources became necessary. AMC was able to tie up a proposal for the resources with the State and Central Government, and LIC only in 1978. But by that time the price rise in cost of material, labour as well as land was such that the 1973 estimates which considered only two years escalation, became outdated. Till June 1986, the expenditure against the project works was Rs. 33.85 crore of which AMC had to spend as much as Rs. 16.5 crore from its own resources as seen in Table 5.

TABLE 5 TIE-UP OF FINANCIAL RESOURCES: PLANNED, ACTUAL AND PROPOSED

Source	Contribution in Rs. Crore		
	As planned in 1978	Actual till June 1986	Current Propo- sal by AMC
1. State of Central Government	12.00	9.84	36.94
2. LIC	9.00	7.50	27.70
3. AMC	10.00	16.51	30.78
TOTAL	31.00	33.85	95.42

SOURCE: *Ahmedabad Municipal Corporation.*

Having foreseen the situation, AMC prepared a revised cost estimate in 1984 and at the prevailing prices put the total cost at Rs. 72.34 crore and put up for approval of Planning Commission and the then Ministry of Works and Housing. This was cleared by September 1985 with target year as 1988-89. But till the end of 1986, financial arrangements were not finalised and works had to stand still. The revised estimate as at the end of 1986 puts the total project cost at Rs. 95.42 crore. AMC requested that financing should be in the same pattern as decided earlier, i.e., about 39 per cent to be borne by State and Central governments, 39 per cent by LIC and the remaining to be borne by AMC. If all the connections have to be metered it may again require about Rs. ten crore. The corroded GI pipes which connect the individual household to the service main have been found to be the major cause for leakage as well as entry of foul water into the supply system and replacing them requires another Rs. ten crore. For providing adequate water supply to the recently annexed East Ahmedabad, funds up to the tune of 80 to 100 crore may be required. The list perhaps can continue and the day when Ahmedabad can look back proudly to say that there is "... water for everyone" seems to be far.

CONCLUSIONS AND IMPLICATIONS

It is appreciated that a local body like AMC could plan and get into the implementation of a project of this nature. However, two critical factors, if ignored, can seriously jeopardize the efficacy of such project. These are, an appropriate design and well worked out implementation.

Implication for Appropriate Design Standards and Decisions

It can be seen from discussions above that meeting the requirements of any urban service like water supply, sewerage or transportation calls for efforts and resources which are generally beyond the scope of a local body. However, it may be too drastic to jump into a conclusion that urban local bodies cannot tackle such an issue. In spite of all the criticisms, local bodies alone allow for a more effective feedback from the concerned citizens and therefore a built-in extravagance-control mechanism is possible. Though we believe in such possibilities, what we don't believe is that level of investment can be brought down with an arbitrary decision making system.

Expressed in a crude manner, the design of an urban water supply system involves three steps:

- an understanding and judgement regarding the expected output based on standards and needs;
- an understanding of the limitations imposed by the natural environment; and
- an appropriate design of various sub-systems and elements.

It is interesting to observe that there exist independent and fully developed fields of science devoted to the second step in terms of hydrological analysis, flood routing, etc., and to the third step in terms of design of network systems and water supply engineering. However, the entire rationality and objective analysis in these two steps base themselves on the decisions pertaining to the first step. The decisions of how much minimum quantity of water is sufficient, what kind of distribution system should we have, etc. are some of the issues totally based either on standards or value based judgements. The standard recommended by the Expert Committee for Manual on Water Supply and treatment for communities with population above 50,000, is a supply of 125 to 200 LPCD.⁸ But the actually adopted figures vary on a much wider range of about 52 LPCD in Jallundhur⁹ to about 240 LPCD in Delhi, with

⁸The expert Committee, *Manual on Water Supply and Treatment*, (Second edition), Central Public Health and Environmental Engineering Organization, Ministry of Works and Housing, New Delhi, 1984, pp. 6.

⁹Town and Country Planning Organisation, *op. cit.*, pp. 45.

others like Madras (73 LPCD) and Bombay (139 LPCD) in between.¹⁰ The other aspect of standard pertains to the mode and nature of distribution system. Should we stop with a community stand post or should we have house to house connection? The trend seems to be following the western standards of house to house connections without assessing whether that is affordable to us as a society. It is basically the loose-footed standards which make the water supply programmes to become grandiose plans involving huge amounts of investment. This lumpiness of investment is precisely the beginning of the "lack-of-funds" vicious circle. To break the circle it is necessary to begin with realistic standards. Higher the quantity of water supplied in terms of LPCD, higher is the cost of water and also higher is the cost of treating the waste water that is generated. On the other hand, higher the quantum of water supplied, lower are the costs of inconvenience to individuals. Similarly, house to house connections avoid the cost of transporting water from standposts to home, as well as cost of possible contamination on the way but add to the investment requirements considerably. We feel that there is scope for further research, in these areas, to evolve a framework for objective decision making. The designs evolved on the basis of these decisions should be tested for the length of network per capita, to avoid over designing or undercoverage which can be wasteful.

Delays in Implementation

Projects of the nature discussed here, in spite of all their excellent design become out dated because of delays in implementation. It appears that delays can crop in due to various reasons some of which are:

- (i) *Delays Due to Lack of Finance:* As specified, the possibility for meeting the capital requirements of water projects entirely from urban government's funds alone, is rather bleak. Therefore all such projects should be phased down explicitly into components such that up to about 60 per cent of the financing of each component can be met by the urban government. Such phasing may take longer time than otherwise to complete the project but can ensure that project does not come to a standstill. All effort to form a specialised financing agency like the proposed Urban Infrastructure Finance Corporation, seems to be positive signal in this arena. What needs to be researched further is how to reduce the time taken to appraise and process the details of a project before releasing the loan amount. An appropriate information system seems necessary.

¹⁰Delhi Water Supply and Sewage Disposal Undertaking, *Budget Estimates 1986-87 and Revised Estimates 1985-86*, DWS and SDU, New Delhi, 1986, pp. 1.

- (ii) *Delays Due to Involvement of Diverse Agents:* This is basically a problem of lack of coordination and agreement and extraordinary dependence on procedures. Therefore we have to rethink on procedural issues as well as means for establishing a forum such that officials in the senior management cadre from all the concerned agencies can come together. If we can informalize industrial development or export service under one window, we can also informalize (with little change in legal doctrines) the inter-agency communication flows.
- (iii) *Delays Due to Legal Issues:* Issues like land acquisition can seriously undermine the plans and proposals and such delays can hamper the basic objectives of the project itself. While designing huge urban infrastructure projects, it may be worthwhile to link the process of detailed designing to land acquisition. Before the finalisation of the design some advance understanding can be established with landlords (and to that extent transfers can be stopped) and then go in for detailed designs of plants, etc., after incorporating any possible changes.

A rethinking and further research on these issues can expedite the formulation and implementation of urban water projects and can avoid unnecessary investments, wastage, locking up of voluminous resources getting locked up in half-built infrastructure systems. □

Municipal Services in Slums of Hyderabad: An Evaluation

GIRISH K. MISRA

THE SLUM population in Hyderabad city is fairly high as compared to other Class I cities in Andhra Pradesh. During the year 1957, about 17 per cent of the population was living in slums by occupying five per cent of the total area in the twin cities of Hyderabad and Secunderabad.¹ A study conducted in 1956-57 revealed that there were 21,842 huts with an estimated population of 67,806.² There were 94 slum localities in the city during 1964 and since the days of the first enumeration of slums in 1956-57, the number of slums started increasing at a very fast rate and by the year 1972, it had reached 284 with a total population of three lakh. In 1979, the number of squatter localities in the city became 455 sprawling over an area of 897 acre and providing shelter to five lakh population as per the detailed survey of slums conducted by a High Power Committee appointed by the State Government. A fast growth of slums is noticed from the year 1972 when there were only 284 slums with three lakh population, which gradually increased from 377 in 1977 to 455 in 1979.³ However, this survey of 1979 excluded all those localities which were less than three years old and the ones situated in the newly incorporated areas of the city on the outskirts.

GROWTH OF SLUMS IN HYDERABAD

The number of slums in 1983 was estimated at 470. However, as per the recent estimation of slums by the Urban Community Development (UCD) Department of Municipal Corporation of Hyderabad in 1983, there were still 167 slums which were excluded from the surveys of 1979 and 1983. These had come up mostly on the periphery of the twin cities but within the municipal boundary with a population of nearly 1.5 lakh.

¹Andrea Menefee Singh *et. al.*, *The Urban Poor—Slum and Pavement Dwellers in the Major Cities of India*, New Delhi, Manohar, 1980, p. 17.

²S. Kesava Iyengar, *A Socio-Economic Survey of Hut Dwellers in Hyderabad City*, Hyderabad, The Indian Institute of Economics, 1959, p. vii.

³Municipal Corporation of Hyderabad, *Environmental Improvement and Slum Housing Programme for Slums of Hyderabad*, Hyderabad, 1983, p. 1.

Thus, presently there are about 1.2 lakh families residing in 680 slums of Hyderabad constituting 28 per cent of the city population.

ENVIRONMENTAL IMPROVEMENT OF SLUMS

In the early sixties, these slums were posing a threat to the entire city due to the prevalence of epidemics like cholera, small-pox and malaria as they were lacking in basic services like dust-proof roads, drainage and sewer lines, protected water supply, street lights and adequate number of community lavatories. During the period 1960 to 1976, an amount of Rs. 161.37 lakh was spent on 92 slums for the provision of various civic amenities like roads, drainage, water supply, street lights and community lavatories both from the State and Corporation funds. During the years 1977 to 1980, Rs. 212 lakh was spent on 215 slums including the 92 slums mentioned above for the provision of partial amenities in each slum locality.⁴ However, these amenities did not meet the full needs of the slum population, but only helped in controlling the dangerous epidemics like cholera and small-pox.

The financial assistance given to the Municipal Corporation of Hyderabad by the State or Central Government is too meagre to meet the basic needs of the slum dwellers. As per the estimation of the MCH in the year 1979-80, the average expenditure on providing basic civic amenities works out to Rs. 1,800 to Rs. 2,000 per family of six members residing in slums. But the Municipal Corporation's main sources of revenue are property tax and entertainment tax and the effective income realised from these sources is only Rupees 16 crore out of which Rupees 12 crore are spent on sanitation and salaries of the MCH employees while the balance is barely sufficient to maintain the existing services not to speak of providing additional civic facilities to the slum dwellers of the city. Further the government provides only 25 lakh in the state budget annually under Environmental Improvement of Slums which is sufficient only to cater to 1,250 families. Besides, the increase of slum localities and their population is so fast that these programmes have hardly been able to make any dent so far.

Despite all these problems and shortcomings, the MCH has been implementing the Slum Improvement Programme in the twin cities right from the year 1967 under the Urban Community Development Programme. Starting with one pilot project in 1967 on an experimental basis and involving about 50,000 people in slums, its aegis now spreads over the whole city divided into seven zones or circles. Unlike the normal programmes of Environmental Improvement Schemes implemented by Urban Local Bodies elsewhere in the states, and the country, the MCH

⁴Municipal Corporation of Hyderabad, *op. cit.*, p. 2.

approaches the problem in a different manner. The approach involves integration of social, economic and civic services in the slums ensuring the participation of slum dwellers in all these programmes. It is with this background that the MCH prepared two Master Plans for Improvement of Slums—the first one for 228 slums covering a population of 2.5 lakh costing Rs. 49.4 million and the other for 207 slums covering a population of 2.64 lakh costing Rs. 88.7 million. One of the special components of this programme is the self-help housing with loan assistance from Housing and Urban Development Corporation (HUDCO) under which the beneficiaries are required to construct houses for themselves with the technical administration and financial assistance extended by the Urban Community Development Department of the Municipal Corporation. The Second Master Plan currently under execution with the assistance of Overseas Development Administration (ODA) of UK Government emphasises on an integrated approach, viz., the development of 207 slum localities located in the seven zones or circles of Hyderabad city. The project known as Hyderabad Slum Improvement Project is designed to provide:

- (i) Civic infrastructure such as dust-proof roads, sewer lines, storm water drains, water supply, street lighting and community lavatories (according to the standard), community halls, avenue plantation, dust bins (garbage removal centres), washing platforms and community baths according to the availability of space;
- (ii) Housing in 34 slums covering 10,000 families including those taken up in 1981;
- (iii) Health and nutrition (preventive health);
- (iv) Pre-school education in selected slums; and
- (v) The economic support programmes to uplift slum dwellers from the absolute level of poverty.

EVALUATION OF MUNICIPAL SERVICES: FIELD OBSERVATIONS

The guidelines of the HSIP mention that the monitoring and evaluation will form an integral part of the project and the programme will be taken up for evaluation right from its initial stages. The main objective of evaluation is to know whether the physical and socio-economic inputs provided to the slum dwellers under the above programme yield the intended social and economic impact on them and if not the evaluation should attempt to provide necessary guidelines to overcome deficiencies.

Keeping in mind the above objective, a survey of 42 slums out of the total of 207 slums was conducted during the months of September and October 1986. The survey of these 42 sampled slums was completed by canvassing a pre-structured questionnaire to the *basthi* leaders of the selected slums. In addition, a direct observation was also

made regarding the availability of civic facilities and their functioning in the sample slums. The sample slums consist of three categories of slums from the angle of the provision of civic amenities under the ODA programme. The first category of slums consists of those localities where as per the physical and financial targets concerning the availability of physical inputs under ODA programme have already been achieved. The second category consists of those localities where the works relating to the provision of physical inputs are in progress and the third category of slums is that where works under the ODA are yet to start.

An attempt has been made in this paper to examine the availability and requirement of the select physical inputs, viz., (i) asphalt roads and Shahabad stone flooring of narrow lanes, (ii) sullage/storm water drains, (iii) sewer lines with inspection chambers, (iv) private toilets and community lavatories, (v) public water stand posts, (vi) supply of electricity and street light points, and (vii) community halls, from the angle of social and spatial accessibility.

However, to get a clear picture of the physical inputs programme, it is necessary to know the number of families for whom the physical inputs programme was originally designed and targets and achievements fixed as per the official records before conducting the present study. It is seen from Table 1 that there is a substantial increase in the number of families in 23 (54.76%) slums out of 42 sample slums and there is a decrease in the number of families in the case of three to four slums at the time of our survey as compared to the number of families for whom the MCH prepared budget estimates. On the other hand, as per the official progress records of ODA out of 42 sample slums there are eight slums (19.05%) where the provision of targeted civic infrastructural facilities has already been made. In 26 (61.90%) slums the works are in progress and for the rest eight slums (19.05%) the lay out plans are either to be prepared or to be approved by the competent authority. Further among the 26 slums where the works are in progress, there are more than 50 per cent slums where the progress of work is more than 80 per cent as far as the official records are concerned. Apart from that, it is to be noted that the above mentioned seven civic amenities were already existing in a number of slums including the sample slums prior to the commencement of ODA programme. Thus, keeping in mind all such aspects, an attempt has been made in the following sections to examine the availability of select seven amenities in our sample slums.

Asphalt Roads and Shahabad Stones Flooring

There is a provision for dust-proofing of streets as well as small lanes and by-lanes in slum areas. According to this provision the main roads above 12 ft width are to be covered by Shahabad Stones flooring. In all

TABLE I CIRCLEWISE LIST OF SAMPLE SLUMS SELECTED FOR THE
EVALUATION OF PHYSICAL INPUTS UNDER ODA
FINANCED HYDERABAD SLUM IMPROVEMENT
PROJECT

<i>Sl. No.</i>	<i>Name of Slum</i>	<i>Ward/ Block</i>	<i>No. of families enumer- ated by MCH</i>	<i>No. of families residing at pre- sent</i>	<i>Provis- ion made in Project Report (Rs. in lakh)</i>	<i>Year of alloca- tion</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CIRCLE I						
1.	Bhavani Nagar	18-7	45	2,000	0.90	1983-84
2.	G.K. Temple	18-7	100	100	2.00	1983-84
3.	Rangeli Khidki	18-7	295	300	5.90	1983-84
CIRCLE II						
4.	Kesari Bagh	14-1	57	150	1.14	1983-84
5.	Meer Sagar Phases I & II	19-4	—	200	1.60	1983-84
6.	Moinpura	19-2	116	150	2.32	1983-84
CIRCLE III						
7.	Dr. Ambedkar Nagar	2-2	60	60	1.20	1983-84
8.	Gandhi Kuteer	3-5	149	270	2.90	1984-85
9.	Indira Nagar (Opp. Himayatnagar P.O.)	3-6	40	36	0.00	1986-87
10.	Krishna Nagar	2-4	335	500	2.20	1986-87
11.	Lal Bagh	2-3	59	100	1.10	1984-85
12.	Nagamaith Kunta	1-9	392	500	7.84	1985-86
13.	Phool Bagh	1-2	178	180	3.56	1984-85
14.	Raghunath Nagar	2-3	243	250	4.86	1984-86
15.	Rishala Khursheed Jahi	1-7	50	235	4.86	1985-86
16.	Thalla Basthi (Advocate colony)	1-2	140	200	2.80	1984-85
17.	Thalla Basthi (Kuwadiguda)	1-3	140	300	1.60	1985-86
CIRCLE IV						
18.	Ajal Sagar	11-1	500	500	10.00	1983-84
19.	Ajal Sagar (Dhobigarh)	11-2	385	500	7.70	1983-84
20.	Maruti Nagar	13-5	200	150	4.00	1983-84
21.	Kailash Nagar	10-3	150	155	3.00	1983-84
22.	Shamrao Nagar	10-1	355	400	7.10	1983-84
23.	Talim Amlapur	13-5	260	260	5.20	1984-85
CIRCLE V						
24.	Fathima Nagar	8-4	75	60	1.50	1983-84
25.	Kamika Nagar	8-3	—	2000	2.26	1986-87

there are 12 (28.57%) slums where cent-per-cent main roads have been covered by asphalt. There is one locality (2.38%) where the coverage is around 80 per cent and in two (4.76%) slums this being 50 to 60 per cent. The rest of 27 slums are yet to be provided with asphalt roads, of which three slums do not require asphalt roads at all. Further out of 15 slums where the main roads are laid with asphalt only in nine (60%) slums the condition of these asphalt roads seems to be satisfactory. Similarly, there are only nine (21.43%) slums where cent-per-cent lanes and by-lanes are covered by Shahabad stones flooring, in 11 (26.19%) slums the coverage being 70 to 90 per cent and in three (7.14%) slums 20 to 40 per cent. The rest of 16 slums are not covered by Shahabad stones flooring out of which in three localities (7.14%) the coverage of lanes by Shahabad stones flooring is not necessary. But among the 26 localities where 55 flooring works are done, only in 22 (80.77%) they are satisfactory.

Sullage/Storm Water Drains

Sullage/storm water drains are necessary for the discharge of rain water and liquid wastes so that the settlement area can remain free from water clogging, mud, filth and dirt. As far as the provision of sullage/storm water drains in the sample is concerned, there are 15 (35.71%) slums having a cent-per-cent coverage of sullage/storm water drains, three (7.14%) slums with a coverage of 90 per cent of the area and another four (9.52%) slums with a coverage of 60 to 80 per cent of the area. The rest 20 slums (47.62%) do not possess sullage/storm water drains at all. Out of a total of 22 slums, there are 15 (68.18%) slums provided with closed drains and eight localities with open drains. This variation in number is due to the existence of both closed and open drains in one slum called Kindi Basthi in Circle VII. According to the opinion of the slum dwellers the functioning of drains in nine (40.91%) localities is satisfactory and as far as the preference for closed or open drains is concerned, the dwellers in 31 slums prefer closed drains and the dwellers in six localities have opted for open drains including the dwellers in those 15 slums where drainage facilities do not exist.

SEWER LINES AND INSPECTION CHAMBERS

Sewer lines and inspection chambers for houses with private toilet facility is a basic necessity for the residential settlements in urban areas for the smooth disposal of the liquid and semi-liquid effluents. There are 19 (45.24%) slums with a cent-per-cent coverage of their areas by a sewerage line network, three (7.14%) slums are with a coverage of

75 to 80 per cent and four (9.52%) with 25 to 40 per cent. The rest of ten (23.81%) slums are yet to be provided with sewerage facility. In 14 (33.33%) slums 80 to 100 per cent households are provided with inspection chambers that are connected to sewerlines, whereas in three (7.14%) slums the percentage being 50 to 70. Six (14.29%) slums are such where this percentage varies between 25 to 40 and in the case of seven (16.67%) localities it is less than 25. Besides, there are two localities, *viz.*, Raghunath Nagar in Circle III and Dood Bai in Circle VII where none of the house is connected to sewer line despite a sewer line coverage of 30 per cent and 35 per cent of their total areas, respectively. Further, out of 32 slums where sewer lines are existing, 14 (43.75%) slums were already provided with sewer lines before the commencement of the ODA programme and no additional line has been laid under the programme to remove the deficiency. As far as the functioning of sewerage networks in the sample slum is concerned there are only 15 (46.87%) slums out of 32 slums having sewerage disposal system where it is reported to be satisfactory. In the rest of localities the sewer lines get choked up frequently and effluents overflow through the manholes due to improper maintenance by the civil works department of MCH.

Private Toilets and Community Lavatories

There are ten (23.81%) slums in the sample where all houses possess their own private toilets, two (4.76%) slums with a private toilet coverage of 70 to 80 per cent of the houses, nine (21.43%) slums with a coverage of 50 to 60 per cent and six (14.29%) slums with a coverage of less than 25 per cent of houses with private toilet facility. Further, among these localities three-fourth localities have dry latrines such as Bhavani Nagar. In the rest of eight localities, the house has its own private toilet to answer the nature's call. Under the ODA programme there is a provision for community lavatories for all the 207 slums so that the poor dwellers will not go to the nearby open field or roads for defecation purposes. However, out of 42 sample slums, there are only 16 (38.09%) localities where community lavatories have been provided. As per the project design one latrine seat should be made available for every 20 persons in the locality. But it is seen that the availability of latrine seats for the dwellers in five localities of the sample is awfully inadequate. Owing to the inefficiency of community lavatories the maintenance of community lavatories is also highly unsatisfactory. Out of 15 localities in the sample provided with community latrines, only in four (26.67%) localities the maintenance of public toilets seems to be satisfactory as per the opinion of the slum dwellers.

Public Water Stand Posts

The city of Hyderabad is well known for its water scarcity. Under the ODA programme, there is a provision of one public water stand post for every fifty families since quite a large number of families are interested to take a separate house water connection if water line is passing through their lanes or by-lanes. There are 18 (42.86%) localities with a cent-per-cent coverage of their areas by water pipes, four (9.52%) localities with a coverage of 70 to 90 per cent, six (14.29%) with a coverage of 50 to 60, four (9.52%) with 30 to 40 per cent and two (4.76%) localities with a coverage of around 20 per cent of their areas. Besides, there are eight (19.05%) slums which are yet to be covered by the water pipes in their areas. The target of one public stand post for every 50 families has been fulfilled in the case of only 11 (26.19%) slums in the sample whereas in the rest of the 23 slums the availability of public stand posts compared to the number of families in each locality is highly insufficient and in five slums for more than every 200 families only one public stand post is available. There are only five (11.9%) slums where more than 40 per cent of the houses have been provided with domestic water connection in various localities like Madrasa Makta, Bhavani Nagar, etc. However, in addition to this, almost all the sample slums except two have been provided with bore well or open well facilities. But compared to the number of households residing in each slum, the availability of bore wells/open wells also seems to be highly inadequate except in the case of five or six slums. Further, due to the hardness of bore well and open well water, it is rarely used for drinking purpose. Consequently, the number of households depending upon public water standposts for the collection of potable water despite a scarcity of supply is unusually very high.

Supply of Electricity and Street Light Points

The provision of electricity facility exists in almost all slums with street light points except one locality in Circle VII called Mettuguda. As far as the supply of electricity with street light points is concerned out of 41 electrified slums in the sample there are 22 (52.32%) localities which were electrified before the commencement of the ODA programme and the rest of the slums have been electrified during the programme period. Out of the 22 electrified slums only ten slums have been provided with additional 147 street light points during the programme period. Besides, there are as many as 16 slums in the sample including the unelectrified ones whose additional requirement of street light points is 223 in the opinion of the *basthi* leaders. However, the functioning of street lights in the slums is highly unsatisfactory. Among the 41 electrified slums in the sample, three (7.32%) slums are yet to be given household connections by the electricity department

despite heavy demands from the public side. Of the houses in 38 slums given electricity connection, there are as many as 18 slums with 75 to 100 per cent household connections, ten slums with 50 to 70 per cent, one slum with 25 to 30 per cent and the rest nine localities with a domestic connection below 25 per cent.

Community Halls

Under the physical inputs programme of HSIP depending upon the availability of sites in slum areas, efforts will be made to provide one community hall in each locality for the recreation of slum dwellers. Besides, these community halls can be utilized as *balwadies* and sewing centres for women in certain localities. However, it is seen that out of 42 sample slums, there are only 16 (38.09%) slums where community halls are existing. But among these halls eight of them have been constructed under the ODA programme and the rest either by *basthi* people themselves or by some other agencies. Among these 16 community halls only 11 of them are provided with water connections. The rest of the community halls are yet to be given water and electricity facilities.

CONCLUSIONS

In our field observations in slums, it was found that the maximum progress of works under the physical inputs programmes had been cornered by the relatively developed and mixed localities whereas the developmental works in highly underdeveloped and poor localities were yet to be started in a satisfactory way. In slums like Gandhi Kuteer, Rishala Kursheed Jahi, Kailash Nagar, Fathima Nagar, Natraj Nagar, Maruti Nagar, Kindi Basthi, Thalla Basthi (Advocate Colony), Thalla Basthi (Kawadiguda), Krishna Nagar, etc., the progress of works is satisfactory. These are relatively richer localities in our sample. On the other hand, the poor localities like G.R. Temple, Rangeli Khidki, Mani Pura, Phool Bagh. Dr. Ambedkar Nagar, Shamrao Nagar, etc., where some of the physical inputs have already been provided, seem to be functioning in a defunct way. Moreover, in mixed localities where the *basthi* leaders are educated and more vocal, the works are executed in an accelerated and satisfactory manner. Besides, the richer group in mixed localities, has been successful in drawing a large share of resources provided in these localities. Thus, it is required on the part of implementing authorities to take necessary precautions such that the poorest of the poor are not left neglected in the process of development in order to make the objectives of the project a total success.

It was observed in the survey that the inputs like sewer lines, storm

water drains are not functioning properly in some localities and the effluents and sewerages very often overflow through the manholes. Even the open drains provided in localities like Mettaguda overflow due to the small size of the drains as compared to the volume of liquids discharged by the residents through sullage/storm water drains. The sewer lines in many localities also get choked up frequently as the diameter of the pipes laid is of very small size as compared to the volume of sewages discharged under them. Hence, to solve the problem of drainage in problem areas rider lines parallel to the existing sewer lines should be provided and sullage storm drains should be renovated properly and manholes should be provided at a distance of 20 to 25 feet. For the inputs like water stand posts, they should be made available to the dwellers as per the standard, *i.e.*, availability of one PSP for every 50 families since water is the basic necessity of life and the water of the borewells in most localities is so laid that dwellers cannot use it for drinking purpose.

To solve the problem of community lavatories, the UCDD has thought of providing private toilets to 80 per cent of the households by meeting 80 per cent of the total cost of private toilets under low-cost sanitation programme. If this programme becomes successful, it will be a commendable performance by MCH. Besides, regarding the malfunctioning of the street lights, the UCDD should bring it to the notice of electricity department so that the fused or defective tubes could be replaced/repared in time. Further, the part of settlement area remaining under darkness should be provided with additional street light poles and in some localities especially in Moinpura and Shamrao Nagar where the service wires of domestic consumers of electricity seem to be dangerous for the residents, the poles should be relaid.

Apart from that in some localities the condition of recently laid asphalt roads is not good especially in Dr. Ambedkar Nagar, Phool Bagh, Kindi Basti, Beedala Basthi, etc. This may be due to the insufficiency of metals laid for the construction of WBM roads at the initial stage. So in future the civil engineering department of MCH should ensure quality control measures before clearing the bills. Also, the roads should not be left unrepaired after their frequent digging for clearing the blockage of sewers and closed drains.

It is to be noted that environmental improvement of slum areas cannot be ensured by providing these seven basic inputs. The slum dwellers are all poor, hapless and distressed migrants from rural areas. They know very little about the functioning and handling of modern technology such as sewer lines, water taps, community lavatories, sullage storm water drains or street light points. They should be properly taught the functioning of these new technologies through demonstrations.

Any suggestion about the maintenance of physical infrastructure by

the slum dwellers should be refuted on the grounds that it would lead to more chaos than the present system. The slum dwellers are highly suspicious of each other and nobody would contribute voluntarily towards the maintenance of the infrastructure. However, it would be in the fitness of things if the MCH levies taxes on these slum dwellers for the maintenance purpose.

Lastly, since the resources to provide municipal services for the increasing urban population are limited and the growth of slum population in Hyderabad is much faster compared to the total growth of population, efforts should be made to check the immigration of distressed population from the countryside. □

Land Pooling and Reconstitution in Trichur: A Case Study

P.K. GOPINATHAN

UNSERVICED LAND belonging to various land owners, covered in a Town Planning Scheme, designated for implementing Urban Development Project is pooled together to be provided with all the necessary infrastructure facilities including roads, drains, electricity, water supply, etc. The land is then reconstituted as per the town planning scheme provisions into various buildable plots with basic infrastructure for planned developments. Land required for infrastructure facilities has to be surrendered to the public agency. So also certain portion of their land has to be surrendered free of cost to the Authority towards cost recovery for providing basic facilities to the land and urban development and also for the benefit of community as a planning gain considering the unearned income generated by the scheme. This process in Urban Development is called land pooling and reconstitution.

One of such a unique programme has successfully materialised in Trichur. Trichur Town is situated almost in the central part of Kerala state, the southern most state in India.

Trichur Urban Area

Trichur town is situated almost in the central part of the state, at a distance of about 80 kms. from Cochin, the natural major port of the country known as the 'Queen of Arabian Sea'.

The town is provided with an excellent network of roads with linkage to National Highway No. 47, passing through the central town and a new wide bye-pass to the above highway is opened up in 1986 which is about 9 km. south of the Town. The Town is rich with vast and resourceful hinterland with coconut, palm and other farm land and low lying agricultural land. The town is on a small hillock providing excellent natural drainage into the outlying agricultural land on its urban fringe. The municipal town comprises only 12.56 sq. km. with a population of only 79,300 as per 1981 census. However, the Trichur Urban Development Authority, constituted by the State Government in 1981 is spread

over an area of 120.24 sq. km. covering adjoining 6 sub-urban panchayats encircling the town. As per 1981 census, the total urban population is 2,86,293.

As in many other towns and cities of the state, pronounced urban development has taken place on the Urban Fringe, outside the Municipal Town area. But for the creation of authority, the fringe development could not have been effectively planned, controlled and guided.

Master Plan for Trichur

Before the constitution of the Authority, the Department of Town Planning of the state prepared the Master Plan (Development Plan) for Trichur. The Master Plan was sanctioned by the state government in 1985 under section 12 of the Town Planning Act of 1108.* The Master Plan area, surpasses the municipal boundaries and covers an area of 35.5 sq. km. while the municipal town is confined to only 12.56 sq.km. The urban fringe area falling within the adjoining area has also been included in the Master Plan, there by delineating the urbanisable area.

Various Detailed Town Planning Schemes taken up for Trichur

Trichur Urban Development Authority (TUDA) was constituted by the state government in 1981 and started its functioning in 1981-82. Before the constitution of TUDA, Trichur Municipality, the responsible local planning authority, had taken up 10 DTP Schemes covering various areas within municipal area. Consequent upon the formation of TUDA Municipality has transferred the Town Planning Schemes to TUDA in compliance with the provisions of the Town Planning Act of 1108 (ME)* 1933 AD. But TUDA had to renotify the above schemes. Besides the above 10 DTP schemes, TUDA has taken up quite a number of new Town Planning Schemes. Most of the new schemes taken up by the TUDA was in peripheral and fringe areas outside the municipal limit, as above areas are in the threshold of rapid development. So far TUDA has notified and taken up 23 DTP schemes besides the Master Plan. Total area covered by above schemes comes to 900 ha.

DTP Scheme for Kannamkulangara Area

Kannamkulangara area is situated in adjoining Panchayat on the southern side of Trichur Municipality. Existing TB Road is on the boundary of both the local bodies. North of TB road has been proposed by the Municipality for implementing Town Centre Extension schemes covered in another Town Planning Scheme. Town Extension schemes included the proposal for central municipal bus stand, marketing

*Malayalam Era.

complexes, shopping centres, hotel complex, etc. From the Town Centre a 25 m wide bye-pass road was also proposed to the south and to cross the TB road forming a junction and to proceed further southward through panchayats. Municipality could develop the above bye-pass road only up to its limit.

Whereas the land on the southern side of TB Road in Panchayat was vacant, low lying paddy field with much potentiality for urban development due to the Municipal proposals on the otherside, was kept by the land owners without cultivation for speculative uses.

This land was absolutely necessary for the expansion of urban uses and also for the formation of continued 25 m road. TUDA has notified the DTP scheme for the above area covering 75 ha. of land there.

Preliminary notification of the scheme was issued on March 10, 1982, as required under section 9 of the T.P. Act and Draft Town Planning Scheme was published on March 1, 1983. Out of 75 ha. of land about 18 ha. of land was marked/designated for acquisition. Of this, 6.244 ha. of land (about 24 per cent of area) by the side of TB Road was marked for acquisition for roads, drains, commercial development and public uses. When the draft scheme was published calling for objections and suggestions from the land and building owners within 60 days from the date of notification of draft scheme as per the statutory provisions of T.P. Act, quite a number of land owners filed their objections/suggestions which included a few land owners of 6.244 ha. of land. Personal hearing was granted to the objectors by a sub-committee of the Authority. There were strong objections against the acquisition proposals.

While the Authority was processing and considering the scheme for finalisation of the draft scheme, one of the land owners of the above 6.244 ha. of land, who happened to possess major portion of land abutting existing TB Road as well as another sub-road, approached the government and obtained a stay order against acquiring his land in considerations of reasons stated by the land owner that Trichur Municipality in the recent past had acquired some of his other property on the other side of the road in Municipal area, for implementing the proposed town centre extension scheme.

Part of the land falling within the 6.244 ha. was essential for implementation of urban development in the largest interest of the city. But Authority could not pursue the acquisition proposal too. Another aspect is that even if acquisition proposals were initiated, on clearing the stay issued by the government, it would have taken much time to complete acquisition proposals under the provisions of L.A. Act. On the whole, it was imperative to find an alternative solution, in view of the limited financial resources of the Authority in its infancy stage.

A proposal was initiated by the Authority for pooling up the 6.244

ha. of land of 10 land owners and for its reconstitution providing required infrastructure facilities for the consideration of the land owners.

LAND POOLING AND RECONSTITUTION

As the 6.244 ha. of land belonged to 10 land owners, land of 3 owners alone was having direct access road frontage for any development. Remaining land was interlocked without any development and any proper access. What was available to them was only a walking right to go for cultivation.

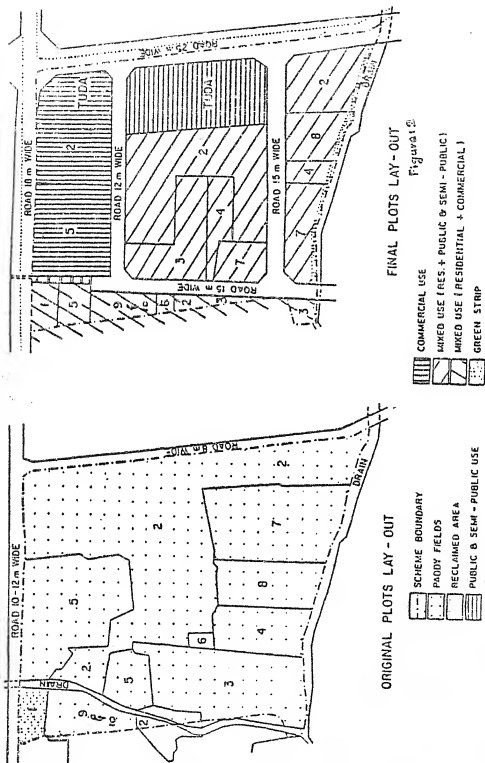
Interlocked land owner took interest in the new proposal which was unheard and unique, while land owners with road frontage did not initially show any interest and they stood on the strength of stay order from the court. Nevertheless, Authority constituted a sub-committee headed by the Chief Town Planner of the state who is also a Board member of the Authority who had initiated the proposal. Author of this article, being the Town Planner and head of the Planning Division of the Authority, could also actively involve and pursue the proposal to its final adoption.

The Proposal

The Map (Fig. 1) shows the entire land before reconstitution in which the existing road and various land belonged to land owners marked separately. The existing two drains are also shown.

The Map (Fig. 2) shows the reconstituted land envisaging proposed road widening and new 25 m wide bye-pass road and internal roads ranging from 12 m to 15 m. So also the land given back to respective land owners and land given free of cost to the TUDA at two vantage point is also marked. Assignment of land uses to respective land as per the town planning scheme and agreed on by the Authority and land owners are also shown.

On the whole, for working out an acceptable broad agreement, 28 rounds of meeting were held. Numerous problems and issues were individually and collectively dealt with. Largest land holding was of 2.66 ha. of land, while the lowest was 0.024 ha. without access. The largest land holding had the benefit of existing road frontage. Land owners initially agreed to give land only for road formation. The argument of the land owners was that it is the responsibility of the Government Authority for the formation of public roads, that too, on paying compensation to their land. Authority went on pursuing and educating the public that due to the scheme the unearned income was generated to the land owner. Those arguments could not initially convince them for an agreement. On the other hand, the Authority continued to stand for obtaining considerable portion of their land to compensate the



investment to be made and also to realise share of unearned income generated.

Considering the existing development carried out to the land and the advantage of road frontage to certain land, differential percentage of land surrender was proposed all the way by the Authority. Authority did not insist on any portion of surrender of land from the smallest holding, but the allocation was made somewhere in the interior with road access as any further reduction of land holding could not be buildable. Interlocked land owners agreed to surrender free of cost about 45 per cent of their total land to the Authority. Thirty per cent of land was agreed to be surrendered by the largest land holder. The following Table gives the name of land owner with extent of land they possessed and the percentage of land surrendered to the Authority free of cost. The serial number assigned to some as shown in relates to their relative physical positions.

<i>Sl. No.</i>	<i>Name of land owner</i>	<i>Extent possessed</i>	<i>% of land given to TUDA</i>
1.	A.S. Pratap Singh	0.10 ha.	10
2.	K.D. Paul	2.66 ha.	30
3.	A.P. Antony	0.73 ha.	45
4.	Mrs. Janaky Krishnan	0.375 ha.	45
5.	A.S. Jayamohanathilakan	0.95 ha,	32.5
6.	E.T. Raghovan Nair	0.024 ha.	0
7.	Mrs. Sujatha Raghovan	0.75 ha.	45
8.	Mrs. Janaky Krishnan	0.375 ha.	45
9.	P.G. Balan	0.2034	45
10.	Mrs. P.G. Balan		

The Authority also insisted on leaving 15 m land from the centre line of drain there as green strip to safeguard against flooding. Land owners on their part, insisted on permitting to use the land given back for mixed use, *viz.*, commercial-cum-residential and public and semi-public-use-cum-residential use and commercial use.

Settlement Accord and Preliminary Agreement:

The Salient Features

Following the verbal accord reached, a written preliminary agreement was executed on July 18, 1984 clearly specifying the terms and condi-

tions to be incorporated in a legally valid document to be registered later. After surveying the land and peg marking the final agreement registered later on September 29, 1985, seven specific conditions were there to be complied by land owners and the Authority.

One of the most important conditions is that the Authority will provide the agreed infrastructure facilities namely roads, drains water mains, electricity, within three years from the date of agreement failing which, the land owners will have the option to occupy and take over the above land. While within another three years, land owners have to develop their land and construct buildings, etc., after getting planning permission from the Authorities, failing which the Authority will have the option to acquire the above land, provided the Authority gave compensation to their land as per the provisions of land acquisition proceedings.

Registration of Legal Document

There is provision under section 4 of the T.P. Act of 1908, for effecting reconstitution of land included in a town planning scheme. But there was no precedent in the above case. The reconstituted land given to the land owners had changed from its original position or in certain cases the land reassigned was some other land owner's land. The reconstituted land required a legally valid document in place of their original document. Registration of numerous number of separate deeds in exchange of land could not be possible as it was not practical nor feasible, besides it involved payment of considerable amount towards registration tax and fee. For this a joint document was prepared in consultation with the Registration department and other legal experts.

State government was requested for granting exemption from the payment of registration duty and fee. The state government was pleased to grant exemption for the registration of above unique document from payment of stamp duty and fee under the provisions of the Kerala Stamp Act of 1959 and Kerala Registration Act of 1908 in public interest. Accordingly the final legally valid joint document was registered on September 28, 1987. The Honourable Minister of Local Administration, local M.P., local M.L.A. and many dignitaries and the public graced the occasion by their presence and participation. The representatives of press and AIR, etc., were also present to witness the fulfilment of above unique scheme for the first time in the state.

Role of Press and People

The press have been continuously giving wide publicity to the above scheme from its very initial stage. Because of wide publicity and

awareness created by the Press, people particularly from Trichur district and state have shown keen interest and other Authorities have also adopted similar approach in some of their Town Planning Schemes.

Implementation

In fact following the signing of preliminary agreement, the Authority took prompt action in carrying out detailed survey and marking of roads etc., much before the registration of document and some of the works were put to tender. Land owners willingly cooperated as it was in their interest also to provide new roads, etc., opening up the land for further development.

The Authority retained two separate land blocks besides the area occupied by roads/drains; one piece of 0.16 ha. was at the corner of a large road junction marked for commercial development while 0.78 ha. of land for public use, abutting 25 m wide bye-pass constructed recently. The Authority decided to construct a multistoried commercial complex in the former case, whereas the latter land was sold to the following central government department at a fixed price:

1. Life Insurance Corporation for housing their multistoried office complex;
2. Central Excise Department for their office building;
3. Postal Department for their head Post Office;
4. Income Tax department; and
5. Required land for the construction of TUDA's office building.

The price fixed was at Rs. 30,000 cent (40 m²) including the cost of developed land and infrastructure provided.

Investment by Authority and Cost Recovery

About 90 percent of the works has been carried out by TUDA, though the period available to TUDA is up to September 9, 1988. Whereas the land owners in their part are also preparing further development, few land owners have sold portion of their land whereas 14-storied most modern hospital building is under construction. The Authority so far incurred about Rs. 42,00,000 and about Rs. 4,00,000 may have to be incurred further to fulfil the total commitment.

From the sale of 0.78 ha. of land (about 193 cent) which include the land reserved for office building by TUDA, the Authority receives Rs. 57,90,000. Further assuming that corner plot of 0.16 ha. (40 cents) received by the Authority for commercial development may

have a market value of Rs. 1,00,000 at present bringing its value to Rs. 4,00,000.

Cost Analysis

	Rs.
(A) 1. Approximate Expenditure incurred so far	42,00,000
2. Anticipated further expenditure to complete the agreement conditions	4,00,000
Total	46,00,000
(B) 1. Cost Recovery on the sale of 0.78 ha. (193 cents) of land at Rs. 30,000 for public use	57,90,000
2. Estimated value of 0.16 ha. (40 cents) of commercial plot held by the Authority for commercial development assuming Rs. 1,00,000 cent.	40,00,000
Total	97,90,000

Estimated benefits to the

Authority (A—B) Rs. 97,90,000—46,00,000=Rs. 51,90,000

For the implementation of above scheme the Authority has availed loan assistance from state government which has to be repaid with interest. Even after the repayment of loan amount with interest and charging certain percentage for the establishment and administrative expenses (assuming 10% of investment made), the scheme has positively benefited the Authority which would be used as a revolving fund for investment in some other scheme.

Benefits of Scheme

TUDA has received 2.2066 ha. of land from the land owners, which comes to 35.33 per cent of the total land involved in the scheme. After utilising 1.2666 ha. of land for roads and drains, the Authority could obtain land with all the infrastructural facilities at two vantage points, abutting 25 m bye-pass road. Approximate value of the above 0.94 ha. of land is estimated to be Rs. 97,90,000. For the infrastructure development, the Authority needs approximately Rs. 46,00,000.

While, on other hand, land owners received back their 64.67 per cent of land with all the infrastructural facilities required for further developments, which includes the land development by filling up and construction of buildings by them. Land owners are having a total period of six years for the total development to be carried out in their land from the date of document registration. But the implementation of the scheme

benefited the land owners as land value may have increased to about 600 per cent to 800 per cent, according to its relative position.

Another advantage is that the entire area will be developed within a time frame. Mutual cooperation and participation of land owners and emergence of joint entrepreneurship (combination of public and private sectors) in urban development, in place of mistrust, legal battle and bureaucratic red tapism are the other valuable fruits of the scheme.

Problems and Difficulties

Problems and difficulties confronted in formulation, acceptance and implementation of this unique scheme are many. Considerable resistance of certain land owners, particularly from those who held large extent of land with readily available road frontage was there. As stated above, one of the land owners had even obtained a stay order from the court against acquisition of land. Majority of the land owners were not attending the meeting convened for discussion for finding solution to the problem and for arriving at an acceptable settlement. It is also a fact that certain other vested interest group and other large holders of urban land in the nearby vicinity may have been prevailed over not to agree to the proposal, fearing that similar approach may be initiated against their land too in future.

It is only a fact that the officers who have been actively involved with the concept and formulation and persued with dedication and determination attracted displeasure and anguish initially from certain sections. Therefore, any failure in the implementation of the scheme and its non-viability would have put them in great difficulties and accountable. For achieving immediate return and benefit, to make this scheme a novel venture with success, and to apply similar approach in other schemes and ensure the timely implementation of above urban development scheme *in toto*, a short time frame was incorporated in the agreement. Under this, the Authority has to complete the execution of committed works within a period of 3 years failing which the land owners are eligible for occupation of the land. This was a risk taken by the Authority with a challenge. The Authority, however, has taken adequate steps for the commencement of the implementation of above works in right earnestness.

For the registration and exchange of reconstituted land, it was necessary to have new deed and documents for each piece of land to be held by all the land owners and the Authority. It would have been so complicated an issue requiring substantial amount on part of the Authority towards registration fee and stamp duty, etc. When government was moved for granting exemption from payment of stamp duty and registration fee for the registration of a joint document in place of

numerous number of documents for exchange of land among land-owners, etc., it was found that there was no precedent in such matters. Law department of the state government have examined the proposal in detail and recommended the case. In consideration of all related matters, the government have granted exemption from the payment of stamp duty and registration fee for the above registration.

Another problem faced is in physical surveying and reconstitution of land clearly demarcating each piece of land to the satisfaction of every land owner. In the absence of clear basic land records in respect of each land piece held by owners, it was also a difficult task. The entire land was surveyed in the presence of land owners and surveyor engaged by them and surveyor and officers of the Authority. Copies of the map of the reconstitution of land was given to the land owners for their reference. Land demarcated for roads, drains, etc., were marked at first and on their acceptance the Authority planted the survey stones.

Officers of the registration department of the state government were in constant touch from the stage of drafting the document which was scrutinised and cleared by the District Government Pleader and agreed by the lawyer of the land owners. There were plenty of clarifications and queries raised by the Registration Department. To them, it was a deed unheard and never registered. Local Sub-Registrar, District Registrar and Dy. Inspector General of Registration department were also associated with the preparation of above document to avoid any possible objections later. But it is to note that no formal correspondence with them in the matter was carried out and discussions and meetings took place always in an informal way with an element of personal touch.

Observation.

Urban land-man ratio of the state is one of the smallest in the country. There is a new trend in rapid urbanisation of the state though the level of urbanisation as per 1981 census is only 18.74 per cent which is lower than the national average of 23.21 per cent. The fact is that the Census of 1981 does not indicate the true urbanisation level of the state as quite a number of class III cities (to be precise) 9 towns, viz., Kanhangad, Haripad, Payyannoor Kanjirappilly, etc., and 15 class IV cities, viz., Njarakkal, Baloramapuram, Kovalam, Ettumanoor, Ponkunnam, Pattambi, Kunchara, etc.) have been omitted. There seems to have been a major redefinition of towns and cities in Kerala but no details are available hence many towns could not be traced in 1981 census.¹

Moreover, particularly in the last decade, there has been considerable inflow of wealth to the state from the Middle East countries increasing

¹Planning Commission, Task Force on Housing and Urban Development, Vol. 1, *Planning of Urban Development*, 1983, p. 64.

purchasing power of a section of people. These factors coupled with the unique urban settlement pattern created substantial pressure on urban, urban fringe and urban hinterland increasing the land values very high. Another factor is the low density of residential development in the urban fringe area without adequate urban infrastructure facilities and supporting employment generation. For providing urban infrastructure facilities and creating employment in the urban fringe areas, only course left to the authorities is to acquire land resorting to land acquisition proceedings. It has also to find land for providing low cost housing to the economically weaker sections and less fortunate sections of the society. Considering very limited financial resources by the state government and various development authorities of the state government, what is practically possible is to acquire only a very limited and negligible quantum of land.

The net result is that the implementation of various urban development and improvement schemes are considerably delayed. Delivery of social and civic services are either delayed or postponed. In a way, such delay is also a social injustice to the urban poor in particular. In any urban situation, almost all the vacant urban land, agricultural land at the fringe areas necessary for natural expansion of the city/town area is held by private land owners. It is a universally accepted fact that the private land owners on the periphery of towns are the ones who are benefited the most due to urbanisation and public schemes. There is unearned increment in the value of vacant urban land and no approach and policy is worked out in tapping a portion of it.

CONCLUSIONS

Land pooling and reconstitution of urban vacant land in the way as implemented in Kerala can be more or less accepted as one of the policy tools for urban development. This would result in timely implementation of Urban Development Projects for each area bringing land owners and various public agencies as partners of progress. When several of such viable schemes are actually implemented, other land owners in urban settlements will come forward or can be easily persuaded for sharing the benefits too. Another prospect is to keep the land values under control and eliminate land speculation.

Following the success of above land pooling and reconstitution scheme, the Trichur Urban Development Authority could adopt the same strategy for the land adjoining the above area and the implementation of the infrastructural facilities required for the entire Detailed Town Planning Scheme for Kannamkulangara, covering a total area of 75 ha. of land has been more or less completed within a very short period. So also the Authority has initiated similar approach in other

Detailed Town Planning schemes taken up in other areas too as it is getting popularised.

It is of paramount importance that detailed study and research is carried out to explore the possibility of adopting land pooling and reconstitution of urban land to be practically followed up in developing countries with rising urbanisation level, as that of India. □

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Noise Pollution in Urban India: The Neglected Dimensions

S. SIVA RAJU

RAPID URBANISATION and industrialisation especially in developing countries lead to several problems in urban areas like high growth rate of population, overcrowding, housing shortages, growth of slums, insufficient civic amenities, lack of proper transportation facilities and environmental pollution. Noise pollution which forms one of the major pollution problems, is slowly becoming recognised as an unjustifiable interference and imposition upon human comfort, health and the quality of life in urban areas. Noise from industry and noise from the community itself are undeniably linked as part of the urban problem. It is said that noise arises to the extent of 90 per cent of the time, from either manufactured goods or from the manufacturing process itself.¹ At no time man in urban centres appears to be free from the impact of noise. In an industrial survey, Kameswaran observed that "the worker is never free from noise at any part of the day. He wakes up to noise from transistors, works in a noisy industry, goes to his work place through noisy streets lined with loudspeakers and returns to a noisy home. By all standards, he exceeds the permissible noise level".² The intensity and complexity of the problem of noise pollution show that there is an urgency to take comprehensive measures to combat this problem and thus to improve the quality of life of people. This article focuses on the nature and levels of noise pollution and its effects on health condition of the people in our urban areas.

Noise can be defined as "the unwanted and unacceptable sound with reference to some criterion of the observer. The criteria are either the extent to which noise interferes with something the observe is doing, such as listening, talking, sleeping or working, or the extent to which

¹Milne Antony, *Noise Pollution—Impact and Countermeasures*, David and Charles, North Pomfret, Vermont, USA, 1979, p. 34.

²S. Kameswaran, *Findings from an Industrial Survey*, quoted in Maheswari Pradyuman, "Noise Pollution near Schools—The Negative Factor", Bombay, *Indian Express*, 8 July, 1987.

noise is concerned with determining these criteria".³ It is generally defined as a sound without agreeable musical quality, or as an unwanted or undesirable sound.⁴ In short, it is described as "wrong sound, in the wrong place, at the wrong time".⁵ Major sources of noise pollution are automobiles, factories, industries, aircrafts, construction activities and domestic noise from TV and radios. Festivals and marriage celebrations, fares, ceremonies, religious and political processions also contribute to noise pollution to a great extent in urban centres.

LEVELS OF NOISE POLLUTION

Intensity of noise depends upon the amplitude of the vibrations which initiated the noise and it is measured in decibels (dB). It is generally found that normal conversation produces a noise of 60-65 dB; whispering 20-30 dB and heavy street traffic, 60-80 dB. A daily exposure up to 85 dB is about the limit people can tolerate without substantial damage to their hearing.⁶ The following levels of noise are evolved as acceptable in different settings (Table 1) :

TABLE 1 ACCEPTABLE NOISE LEVELS (dB)

Place	Level of dB
Residential : Bedroom	25
Living room	40
Commercial : Office	35-45
Conference	40-45
Restaurants	40-60
Industrial : Workshop	40-60
Laboratory	40-50
Educational : Classroom	30-40
Library	35-45
Hospitals : Wards	20-35

SOURCE : O.H. Koenigsberger, *et. al.*, Manual of Tropical Housing and Building, Part I, Climatic Design, Bombay, Orient Longman, 1973, cited in J.E. Park and K. Park, *Textbook of Preventive and Social Medicine*, Jabalpur, Banarsidas Bhanot, 1983, p. 174.

It is measured that human heart beat has an intensity of about 15 dB,

³L.R. Hartley, "Noise and Man" in Stephen Krauss (ed.), *Encyclopaedic Handbook of Medical Psychology*, cited in "A Report on a Pilot Survey of Social Attitudes Towards Noise Pollution in Delhi", The Indian Institute of Public Opinion, New Delhi, 1984 (mimeo), p. 2.

⁴*Health Hazards of the Human Environment*, Geneva, World Health Organization, 1972, p. 257.

⁵J.E. Park, and K. Park, *Textbook of Preventive and Social Medicine*, Jabalpur, Banarsidas Bhanot, 1983, p. 173.

⁶*Ibid.*, p. 174.

a typewriter records 40 dB, an average city office 55 dB, an average city street 75 dB, a motor truck 80 dB, a loud thunder and a motorbike 110dB, a pneumatic drill 120 dB, a siren 150 dB and launching of space rocket 170 dB.⁷ The noise of a jet aircraft is 10^{13} times as intense as that of a whisper (about 20 dB).⁸ The intensity of noise pollution in our environment is clear from Table 2 which provides sound levels of different sources of noise.

The level of noise pollution in Indian cities are found to be relatively high when compared to some of the other countries in the world. Studies conducted by NPL⁹ in Delhi, Calcutta, Madras, etc., show that average noise levels of Indian cities are 85 to 106 dB whereas the noise levels in European cities are 85 to 95 dB only. Similarly, it is observed that an Indian truck or bus generates over 95 dB levels travelling at a speed of 30 km/hr compared to Europe's 80 dB. It is estimated¹⁰ that level of noise pollution doubles in every 10 years in pace with industrialization and modernization particularly in cities like Bombay, Calcutta, Delhi and Madras.

EFFECTS OF NOISE POLLUTION

Noise that exceeds tolerance limit affects man, plants, insects, birds and animals. It affects not only the mental and physical health and well-being of citizens, but also has broad socio-economic implications. Depending on nature, intensity and duration of noise, it is found to be deleterious to human health ranging from minor irritation to heart attacks. It generally affects sense organs, cardio-vascular system, glandular and nervous system. Repeated or continuous exposure to noise around 100 dB may result in permanent loss of hearing.¹¹ High frequencies of ultrasonic sound above the normal audible range can affect the semi-circular canals of the inner ear and cause nausea and dizziness. The mildest effect is often physical and mental fatigue and lack of concentration. This effect is important in industrial situations, because it results in lowered efficiency, a reduced work rate, increased absenteeism and a higher potential for accidents and injuries.¹² Oke says¹³ that due

⁷H.U. Bijlani, *Urban Problems*, New Delhi, Indian Institute of Public Administration, 1977, p. 133.

⁸Milne Antony, *op. cit.*, p. 57.

⁹J.M. Dave, "Some Considerations of Environmental Issues of Urban Growth", in C.S. Chandrasekhara, and Deva Raj (eds.), *Urban Perspectives—2001*, National Institute of Urban Affairs, New Delhi, 1978, p. 181.

¹⁰S. Siva Raju and I. Udaya Bhaskara Reddy, "Urbanisation and Urban Problems in India", *Nagarlok*, Vol. XVIII, No. 3, July-September, 1986, pp. 1-20.

¹¹J.E. Park, and K. Park, *op. cit.*, p. 174.

¹²H.M. Dix, *Environmental Pollution—Atmosphere, Land, Water and Noise*, USA, John Wiley, 1981, p. 193.

¹³Oke's statement cited in Maheshwari Pradyuman, "Noise Pollution near Schools—The Negative Factor", *Indian Express*, Bombay, July 8, 1987.

TABLE 2 SOUND LEVELS OF SOME NOISE SOURCES FOUND IN DIFFERENT ENVIRONMENTS

Overall level in dB	Industrial and Military	Community (outdoor)	Home (indoor)
140—painfully loud	carrier deck jet operation (140 dB) oxygen torch (126 dB)	—	—
130—	pneumatic chipper (122 dB)	—	Discotheque (120 dB)
120—uncomfortably loud	pavement breaker (115 dB) textile loom (112 dB) cut-off saw (106 dB)	jet flyover at 300m (110 dB) power mower (103 dB) Excavation rock drill at 15m	— — —
110—	Farm tractor (103 dB)	(100 dB)	—
100—very loud	Newspaper press (101 dB) Bench lathe (95 dB) Milling machine (90 dB)	Motor cycle at 8m (96 dB) Heavy truck at 15m (93 dB) Train whistle at 150m (90 dB)	food blender (90 dB) alarm clock (85 dB) garbage disposal (83 dB)
90—	Bed press (86 dB) Key punch machine (82 dB)	—	clothes washer (82 dB) Living room music (78 dB)
80—moderately loud	—	passenger car, 100 km/h (76 dB) church bells at 50m (70 dB)	Dishwasher (76 dB) TV-audio (73 dB) vacuum cleaner (72 dB)
70—	—	light traffic at 30m (66 dB)	—
60—quiet	—	—	toilet flush (65 dB) conversation (60 dB)

50—	—	—	—
40—	—	—	—
30—very quiet	—	—	—
10—just audible	—	—	—
0—threshold of hearing	—	—	—

SOURCE: A. Cohen, 'Sound and Vibration', Bethesda, Md, National Library of Medicine, cited in World Health Organization, *Health Hazards of the Human Environment*, Geneva, 1972, p. 258.

to noise pollution, there is a tendency of the heart rate to increase, aggravation of peptic ulcer, asthma and constant complaints of hypertension. Possible effects of traffic noise may include acceleration of the presbycusis process and disorders due in particular to prolonged disturbance of sleep.¹⁴ Direct relationship is observed between lengthy exposure to noise and the incidence of heart disease, cardio-vascular dysfunctions, gastro-intestinal disorders and problems associated with endocrine and metabolic functions.¹⁵ It can affect the blood circulation, the contraction rate of the pupils and the secretion of sweat and saliva. Many workers in heavy industries may become accident prone and quarrelsome, or they may suffer from migraine and fatigue.¹⁶ Excessive noise can influence occupational accident rates by affecting the movements on which accuracy depends and the perception of auditory signals.¹⁷

Several studies have been carried out from time to time in different countries to focus on the effects of noise pollution. In UK, an industrial welfare society survey¹⁸ found that 24 per cent of workers in 55 firms were working in such noisy conditions that the employees were auditorily isolated, and unable to communicate with each other. In USSR, it is shown¹⁹ that long-term exposure to intensive high-frequency noise produces numerous temporary shifts in the activities of the central nervous and cardio-vascular systems such as weakening of cardiac muscle contractions. From the study of the relation of Kennedy International Airport to the people of surrounding areas of New York city,²⁰ it is

¹⁴OECD Consultative Group on Transportation Research, "Urban Traffic Noise—Strategy for an Improved Environment", 1971, Paris, Organisation for Economic Co-operation and Development, cited in, World Health Organization, *Health Hazards of the Human Environment*, Geneva, 1972, p. 264.

¹⁵US Department of Labour Guide to OSHA standards, 'Noise' 1972, p. 3., cited in Milne Antony, *Noise Pollution—Impact and countermeasures*, North Pomfret, David and Charles, USA, 1979, p. 14.

¹⁶Milne Antony, *op. cit.*, p. 15.

¹⁷E.R.A., Merewether "Industrial Medicine and Hygiene", London, Butterworth, Vol. 2, 1954, cited in Bell Alan, *Noise—an Occupational Hazard and Public Nuisance*, Public Health Papers: 30, World Health Organization, Geneva, 1966, p. 36.

¹⁸H.M. Dix, *op. cit.*, p. 211.

¹⁹A.B. Strakhov, Gig-i-Sanit, 4 April, 1964 p. 29, cited in Bell Alan, *Noise—An Occupational Hazard and Public Nuisance*, Public Health Papers: 30, World Health Organisation, Geneva, 1966, p. 36.

²⁰"Jamaica Bay and Kennedy Airport: A multidisciplinary environmental study", Vol. II, Chapter 2, Jamaica Bay as a resource for the people of New York city and the surrounding region, National Academy of Sciences, National Academy of Engineering, Washington D.C., 1971, cited in L.E. Hinkle, Jr. and W.C. Loring, *The Effect of the Man-Made Environment on Health and Behaviour*, London, Castle House Publications Ltd., 1979, pp. 220-221.

reported that more than 7,00,000 people live within an areas in which the noise of the aircraft interfered with their sleep. In the same area, there were 266 public and private schools, attended by approximately 2,75,000 pupils whose schooling was interrupted regularly by aircraft noise. The WHO estimated²¹ that in 1969, the financial losses resulting from accidents, absenteeism, inefficiency and compensation claims attributable to industrial noise in the USA alone amounted to four billion dollars.

A few studies have focused on the intensity and effects of noise pollution in major cities of our country. Studies conducted by National Physical Laboratory²² revealed that the street noise during the day in cities like Bombay and Delhi was intolerably as high as 90dB and it was seldom below 60dB. In a recent survey it was observed that Bombay was the noisiest city in the country. Its average day and night noise was 75 dB—the highest being 105 dB near the airport. A report of the Committee²³ serves as an indicator to the extent of noise pollution. The Table 3 points out the severity of perceived noise effect.

TABLE 3 SEVERITY OF PERCEIVED NOISE EFFECT
(HIGHER THE MARKS, HIGHER THE SEVERITY)

Noise effect	Marks
Lack of concentration	430
Disturbance in children's studies	339
Restlessness	332
Disturbance in sleep	320
Headache	242
Anger	238
Interference in communication	217
Impairment in hearing	140

A study²⁴ found that 86 per cent of respondents in Delhi were of the opinion that incidence of noise pollution was so high that it affected

²¹W.C. Osborn, "Environmental Pollution Control", edited by McKnight, Marstrand and Sinclair, Allen and Unwin, 1974, p. 277 cited in Milne Antony, *Noise Pollution—Impact and Counter Measures*, North Pomfret, David and Charles, Vermont, USA, 1979, p. 35.

²²Mayur Rashmi, "Dimensions of Urban Pollution", in C.S. Chandrasekhara and Deva Raj, *Urban Perspectives—2001*, National Institute of Urban Affairs, New Delhi, 1978, p. 168.

²³Findings of the Committee appointed by Mrs. Justice Sujatha Manohar, cited in Maheshwari Pradyuman, "Noise Pollution near Schools—The Negative Factor", *Indian Express*, Bombay, July 8, 1987.

²⁴Indian Institute of Public Opinion, "A Report on a Pilot Survey of Social Attitudes towards Noise Pollution in Delhi", New Delhi, 1984, (mimeo), pp. i-viii.

their quality of life. Road traffic and loud speakers are considered to be the most disturbing. In another study conducted in Delhi²⁵ respondents felt that noise pollution affected their sleep or rest (82%), studies or reading (63%) and recuperation (63%), followed by hearing ability (48%), mental peace (39%), conversation (35%), blood pressure (31%), meditation or prayers (26%), TV or radio listening (22%) and routine work (21%). An industrial survey²⁶ showed that in 50 per cent of the industries, the agitating mood stems from a group of workers working in the noisy section of the respective industries. The rate of increase of motor vehicles which is one of the major sources of noise pollution is noticed to be about 20 per cent per annum in most of the cities. It is reported that about 80,000 to 90,000 vehicles are added every year to Delhi's already packed roads.²⁷ In Bombay, there are 4,60,000 vehicles and the increase in the number of vehicles is to the extent of 70 a day.²⁸

NOISE POLLUTION AND CONTROL MEASURES

The very urgency, complexity and magnitude of the problem of noise pollution calls for effective and well-planned measures. Government, industries and research institutions have all given so far, a low priority to evolve strategies to prevent the epidemic of this invisible disease from spreading further. It is high time that we wake up and adopt comprehensive measures to combat the problem of noise pollution. Some of those measures may include:

1. Whenever a new machinery is installed, a careful consideration of the monitoring and location of machinery and equipment should be made; as it is ideal to reduce noise at its source itself.
2. As far as possible, noisy machines and processes have to be isolated or they have to be covered so as to restrict a noisy work area. This will also help to prevent noise propagation over the entire working area.
3. There should be a regular monitoring of noise levels in industrial establishments and the noise levels should be made available to their employees. This will help the workers to be aware of the risk at work.
4. To reduce the noise pollution made by vehicles, all drivers have to be educated properly on various effects of noise.

²⁵B.R. Patil and Saveera, "A Study of Social Attitudes towards Noise Pollution in Delhi", Council for Social Development, New Delhi, 1984 (mimeo), pp. 66-80.

²⁶S., Kameswaran, *op. cit.*

²⁷*Indian Express*, "Delhi's Roads are Cracking up", Bombay, December 28, 1986, p. 3.

²⁸Mayur Rashmi, "London Smog Can Hit Bombay", *Indian Express*, Bombay, February 14, 1987.

5. Whenever necessary, ear plugs and other such protective devices should be provided for the employees of industries as an internal protection from noise. This will also help to improve their efficiency in work. A study among Lancashire weavers²⁹ found a 12 per cent increase of personal efficiency when ear plugs were worn, the gain in material production being around one per cent. A similar investigation in Indian Jute Mills³⁰ lead to the conclusion that individual protection can benefit production.
6. Effective and suitable legislative measures have to be promoted to control noise, to establish damage-risk criteria and to compensate those who become victims of noise pollution.
7. It is observed³¹ that young people are getting more and more interested in environmental issues and want to be actively involved in the solution of these problems. Anti-noise campaigns with the help of young people, have to be initiated. These measures can serve as a useful purpose in focusing public attention on the matter.
8. Generally people do not complain unless they realise that noise is a nuisance and has deliterious effects on their health condition. It is very important that people should be well informed about the extent, nature and effects of noise pollution. Both interpersonal and mass media sources have to be effectively utilised to educate the people on the importance of noise as a community hazard. □

²⁹H.C. Weston and S. Adams, "The Performance of Weavers under Varying Conditions of Noise", 1935, in Fifteenth Annual Report of the Industrial Health Research Board, London, H.M. Stationery Office (Report No. 70) cited in Bell Alan, *Noise—An Occupational Hazard and Public Nuisance*, World Health Organization, Geneva, 1966, p. 34.

³⁰H.C. Ganguli and M.N. Rao, "Noise and Industrial Efficiency: A Study on Indian Jute Weavers", Calcutta, 1950, (All India Institute of Hygiene and Public Health, Industrial Health in India Series, No. 23) cited in Bell Alone, *Noise—An Occupational Hazard and Public Nuisance*, World Health Organization, Geneva, 1966, p. 34.

³¹"Environmental Education: A Step Towards the Solution of Environmental Problems by Changing People's Attitudes"; ECE Symposium on Problems relating to Environment, United Nations, 1971, cited in Centre for Urban Studies, *Environmental Pollution and Urban Administration*, Indian Institute of Public Administration, New Delhi, 1977, p. 56.

Regional Disparities in Urban Development in Uttar Pradesh 1901-81

K.N. DUBEY

THE PROBLEM

THE DEVELOPING areas with colonial background are characterised with high degree of regional disparities in development. These disparities are more pronounced in the case of urban development. In colonial set-up urban centres act as node of administration and exploitation.¹ While in developing economy these centres are viewed as service centres and channels of development impulses to rural areas.² In this context it is expected that the pattern of urban development would vary from colonial to developing period.

It is often assumed that the regional disparities created during colonial period have been exacerbated in the post-independence period of development. Probably no empirical study exists to testify this hypothesis. The present paper is an attempt in this direction.

RELATED LITERATURE

In India a few sincere exercises were made for the measurement of regional disparities in urban development in post-independence time. Mukerji measured the regional disparities in urban development of Uttar Pradesh districtwise for 1961³ and Dubey made the same exercise

¹A. Kundu and M. Raza, *Indian Economy: The Regional Dimension*, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi, 1982.

²R.P. Misra, *et. al.*, *Regional Development Planning in India: A New Strategy*, Vikas Publishing House, Delhi, 1976; B.J.L. Berry, "Relationship Between Regional Economic Development Urban System: The Case of Chile" *Tijdschrift Voor Economische en Sociale Geographie*, 1969, pp 60, 283-308.

³A.B. Mukerji, "Levels of Urbanisation in Uttar Pradesh, 1961", *Geographical Review of India*, 1973, 35, pp. 30-42.

Tehsilwise⁴ for 1971 and 1981.⁵ Bala attempted the level of urban development in India, districtwise, for 1971.⁶ Thus these studies were confined to post-Independence period, adopted different investigation units and used different methodology for the measurement of urban development. It is not possible to discern the long-term trend in regional disparities in urban development on the basis of these exercises. To fulfil this gap the trend of regional disparities in urban development during 1901-81 in the State of Uttar Pradesh, has been attempted. Up to the year 1901, the colonial development structure was well established in the area. Also the Census data for urban places are available only up to that time. The year 1981 is the latest Census year for which the data of individual urban places are available.

THE REGION

The state of Uttar Pradesh with a total population of 110.86 million in 1981 and an area of 294,411 square kilometres is a mini India. With a long history of colonial dependency of Great Britain the State indicates all the distortions of colonial days. The Western Uttar Pradesh was a canal irrigation zone, central and eastern Uttar Pradesh were the areas of intense rail network, Uttarakhand with cold climatic conditions was a tract of hill resorts and cantonments, and Bundelkhand with sparse population and stoney topography remained an area of neglect with least economic significance to colonial masters.

The State introduced all the development programmes that were introduced for development in the post-Independence period. Western Uttar Pradesh recorded the rapid impact of Green Revolution while rainfed areas of Uttarakhand, Purvanchal and Bundelkhand were bypassed. With the realisation of strategic significance of Uttarakhand, after Chinese aggression in 1962, a dense road network was rapidly built, to link this peripheral zone to the plain tract—the historical and economic hearth of the country.

Despite high regional variations in colonial and post-independence development experiences, physical landscape, resource/population balance and socio-cultural configuration, the administrative structure of Uttar Pradesh remained unchanged since the formation of United Provinces of Agra and Avadh in 1857. The intra-administrative structure of the State, i.e., districts was completed on the eve of the present century. The same districts with a few cosmetic touches here and there still persist. In addition to old administrative functions and revenue units

⁴Tehsils are subdivisions of a district. In 1981 in Uttar Pradesh the total number of tehsils was 242. On average, each district consist of 4.35 tehsils.

⁵K.N. Dubey, "Pattern of Urban Development in Uttar Pradesh", *National Geographer*, 20, 1985.

⁶R. Bala, *Trends in Urbanisation in India*, Jaipur, Rawat Publication, 1986.

districts were made development and planning units in the post-independence period. Hence the trend and pattern of regional disparities in urban development districtwise has been undertaken.

CONCEPTUAL FRAMEWORK AND METHODOLOGY

Usually 'urban growth' is defined as the result of population growth of the urban places and 'urbanisation' as the increase of proportion of urban population to total population.⁷ In urbanisation the role of migration from rural to urban areas is significant. In the region of old settlement of large size villages, one like Uttar Pradesh, most of the new towns are over grown villages which play significant role in urbanisation.

The urban development in addition to urban growth and urbanisation is related with the service functions of urban places to the surrounding rural areas which are contingent upon the size and number of urban places in an area. Urban development leads to change in regional economy by encouraging tertiary and secondary sectors. It also inculcates new values and progressive attitude in the traditional society.⁸ Larger a town, stronger its transforming and modernising impacts.

Thus urban development may be measured by the degree and effectiveness of urbanisation, and service capability of urban places to surrounding areas through the following indicators:

- Urban population as per cent of total population;
- Population in 20,000+ towns as per cent of total population;
- Number of towns per thousand square kilometres of area; and
- Number of towns per lakh of population.

But there is a great difficulty in the application of these indicators in longitudinal dimension. Because the definition of urban places has been frequently changing. It was imprecise before the Census of 1961.⁹ A precise term for the treatment of town was laid in 1961 that remained unchanged in 1971 and 1981 Census.¹⁰ To nullify the impact of changes

⁷R. Salas and D. Valentei (eds.), *Population and Socio-Economic Development*, Moscow, Progress Publishers, 1986.

⁸B.F. Hoselits, *Sociological Aspects of Economic Growths in America*, New Delhi, 1980.

⁹K.N. Dubey, "Small Towns and Rural Development: A Case Study of Uttar Pradesh", Paper presented at the Seminar on *Development and Change in Uttar Pradesh*, GIDS, Lucknow, 1987.

¹⁰The definition adopted was: (a) all places with Corporation, Municipality, Cantonment or Notified Area, (b) all localities though not in themselves local bodies yet are part of city or town agglomeration, and (c) all other places which satisfied the the following criteria: (i) a minimum population of 5,000, (ii) at least 75 per cent of

(Continued on next page)

in definition of urban places, the town list of 1981 has been moved backward up to 1901. Thus, the effect of imprecise definition of towns has been eliminated.

The regional disparities in each dimension of urban development was calculated as indicated in Table 1. The aggregate position of urban development for various Census years was calculated by "summation of component scores". The data for each of the four components of urban development in every district were divided by the corresponding State averages. These four obtained scores were summed up to arrive at the score of urban development.

TABLE 1 UTTAR PRADESH: REGIONAL DISPARITIES IN URBAN DEVELOPMENT, 1901-81*

Decade	Percentage to total population		Number of Towns	
	Urban population	20,000+ Towns population	Per thousand square kilometres	Per lakh population
1981	3.70	5.80	2.48	2.66
1971	4.89	7.41	2.70	3.82
1961	5.51	8.18	3.06	5.31
1951	5.85	6.69	3.16	5.15
1941	4.56	8.58	2.98	6.08
1931	5.65	7.23	2.96	5.70
1921	4.41	8.67	3.00	5.30
1911	4.36	10.13	3.68	5.98
1901	4.17	8.72	3.68	6.88

*Disparity index has been calculated by the formula: value of district at top position minus value of district at bottom position divided by value of district at medium position.

To make it more explicit, in the district of Lucknow in 1981, the proportion of urban population to total population was 52.60; the proportion of urban population in 20,000+ towns to total population was 50.61; number of towns per thousand square kilometres of area was 3.96 only and the number of towns per lakh population was 0.49. These values for the State as a whole were 17.77, 13.44, 5.14 and 0.30 respectively. The score of urban development for Lucknow district in 1981 was

$$\frac{50.01}{17.77} + \frac{52.60}{13.44} + \frac{3.96}{5.14} + \frac{0.49}{0.30} = 9.07.$$

(Continued from previous page)

the total working (male working population in 1971) population was engaged in non-agricultural pursuit, and (iii) density of population exceeds 400 persons per square kilometre. These rigorous conditions resulted in declassification of 222 towns of 1951 into rural areas in 1961 Census, 1971, p. 6.

Likewise the score of urban development for all the districts for the year 1901, 1941 and 1981 were calculated. The districts with urban score 5 *plus* were designated at high level, those with score 3 *minus* were rated at low and those falling in between +5 and -3 were at moderate level of urban development. The spatial shift in urban development has been visualised through the upward and downward movement of the districts in reference to their level of the preceding time of investigation: the upward movement is reckoned positive, the downward negative and at the same level has been rated constant position.

DISCUSSION

In Uttar Pradesh, the trend of regional disparities in urban development during the study period was a very complex one. On the basis of nature and trend of disparities the whole period may be divided into three stages. The period of static position (1901-41), the period of confused position (1941-61), and the period of constant decrease (1961-81).

The Period of Static Position: 1901-41

This stage was the period of colonial dependency. In the very beginning of this stage, the colonial super structure of urban system was well established in the area as manifested in the pattern of urban development in 1901 (Map 1-A). A wide tract of relatively high urban development comprising canal irrigated zone of upper Ganga-Yamuna doab, sugarcane tract of Rohilkhand, and foothill zone of Uttarakhnad was quite district. Outside to this wide tract only two districts Jhansi and Mirzapur were at high level. Jhansi was a divisional headquarter and a big rail junction of colonial time.¹¹ But Mirzapur town on the bank of the river Ganga, was an inland part catering to the business activities of the central region of the country. Despite decrease in its importance with the advent of railways, waterways became the beaten path. Consequently, Mirzapur district remained at high level in 1901 which decreased subsequently.

Contrary to it, the whole of Purvanchal and Avadh, the areas of intense rail network, was at low level of urban development. A narrow corridor of moderate urban development along the broad gauge railway line linking Calcutta, the colonial port town, to present New Delhi that became the capital of British Indian Empire in 1911 via Agra, the capital of old Mughal empire, was also prominent. Thus, canal created a wide tract of urban development and railways made a few big urban nodes reducing

¹¹Government of India, *Supplement to the History of Indian Railways*, Ministry of Railways, New Delhi, 1968,

the areas at low level of urban developments.

At the very beginning of the period in 1901, the regional disparities were very high in respect of effectiveness of urbanisation (8.72) followed by the sufficiency of towns (6.88), degree of urbanisation (4.17) and efficiency of urban centres (3.68, see Table 1). The reason is obvious. The bigger towns were a few and were concentrated in the areas of colonial agricultural interests or at industrial nodes. Some small towns as administrative centres were also scattered in densely populated Purvanchal and Avadh. Consequently, as regards other three dimensions, the regional disparities remained high but not so high as in the case of effectiveness of urbanisation.

From 1901 up to the year 1941, the last Census year, of colonial period, regional disparities increased constantly in degree of urbanisation (4.17 to 4.56) and remained almost static in other aspects: efficiency of urbanisation 8.72 to 8.58; efficiency of urban centres 3.68 to 3.16 and sufficiency of urban centres 6.88 to 6.08 (Table 1).

As the whole period was of colonial dependency with little change in development strategy, the pattern of urban development in 1941 remained identical to that of 1901. The rank order correlation of the districts in urban development between 1941 and 1901 was .73. Out of 56 districts (at present), 45 remained at the same level of urban development. Only two districts Mathura with a cantonment¹² and Badaun in the tract of colonial agriculture moved upward and nine districts moved downward. Among those nine districts, four districts—Hardoi, Hamirpur, Banda, and Jalaun—were located away from the developed urban tract and four districts, viz., Etah, Aligarh, Farrukhabad and Shahjahanpur were on its periphery. In sum, the regional disparities in urban development were always high and quite sharp during this period.

The Period of Confused Position: 1941-61

The period started with the World War II when the ruling power Britain was much involved in the war of life and death rather in the economic exploitation of the colonies. It was followed by Indian independence in 1947, that brought to an end the whole colonial domination in the area. But the whole country was plunged into the deep crisis of refugee settlements, reorganisation of a large number of princely states, reconstruction of bifurcated economy, and management of food problems that followed the independence of the country based on two nation theory of Hindu Indian and Muslim Pakistan. The real strategy of development was finalised only after the formulation of First Five Year Plan (1951-56) with emphasis on agricultural development. It was

¹²Mathura Cantonment become a new town in 1931 Census.

followed by state reorganisation in 1956 and Second Five Year Plan (1956-61) with emphasis on industrial development.

Among the various factors instrumental in the acceleration of this period, urban development, reduction for the refugee settled in urban places accelerated the degree of urbanisation in already developed urban settlements. Consequently, the regional disparities in the degree of urbanisation reached all time high in 1951 (5.85) and decreased in the subsequent decades. In regard to development planning, agriculture, being an area oriented activity and industry a point oriented, specially towards backward regions, generated a few new towns in backward regions. Therefore, the regional disparities decreased in case of sufficiency as well as in case of efficiency of towns. The degree of regional disparities in effectiveness of urbanisation remained fluctuating: 8.58 in 1941, 6.69 in 1951 and 8.18 in 1961 (see Table 1).

The Period of Constant Decrease: 1961-81

Again the trend of regional disparities in urban development became quite distinct after 1961. A constant decrease in each dimension of urban development was obvious. It came down in respect of degree of urbanisation from 5.51 in 1961 to 4.85 in 1971 and reached to 3.70 in 1981. With respect to the effectiveness of urbanisation from 8.18 in 1961 to 7.41 in 1971 and 5.80 in 1981. In the same way substantial decrease in regional disparities with respect to sufficiency and efficiency of towns in terms of population and area respectively were also recorded (Table 1).

If one recapitulates the strategy of development adopted in the State during this period, the three factors stood foremost that acted for the reduction of regional disparities in urban development. First, in the early years of 1960's the previous strategy of development based on the principle of economic efficiency continued. Second, since Fourth Five Year Plan (1969-74) emphasis shifted on efficiency along with equity and social justice. The regional balance became a chief plank of development planning and removal of regional imbalances became part and parcel of planned development. Many area oriented programmes for the development of special problem areas were undertaken.¹³ Third, as a safeguard against flowing of benefits of area oriented programmes to the richer sections of the society, most, a number of people oriented programmes were also introduced.¹⁴

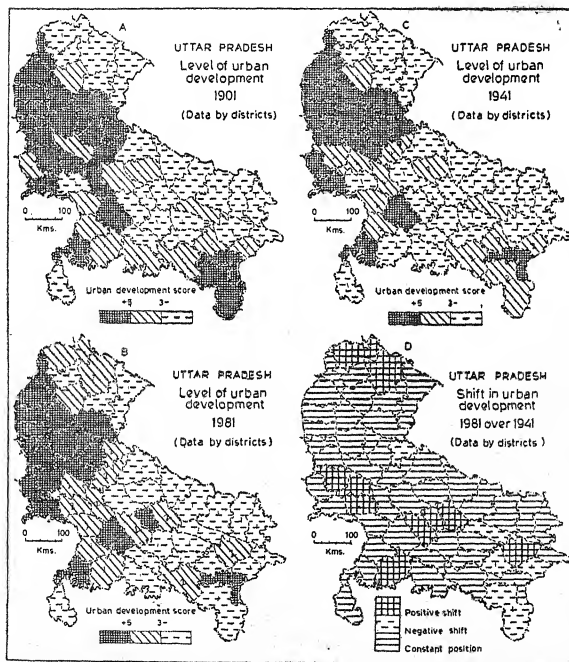
The impact of area and people oriented programmes on urban development was manifest in two ways. First the urban development was

¹³The chief area oriented programme are Command Area Development Programme, Drought Prone Area Development Programme, Hill Area Development, Integrated Tribal Area Development.

¹⁴The chief target group oriented programmes are Training of Rural youth for Self-Employment, Antyodaya, National Rural Employments Programme, Development of Women and Children in Rural Areas, Small Farmers Development Agency, etc,

spread in all the parts of the State. Secondly the level of urban development improved in all parts of the State. The net outcome was substantial decrease in regional disparities in each dimension of urban development. But overall the urban development pattern established during colonial period remained unaltered (Map 1c). Even then few significant changes were quite distinct:

—The northern Uttarakhand, an area of peripheral location and sparse population, recorded high positive urban development.



MAP 1

- A broad zone of high urban development from Jhansi up to Barabanki district incorporating the two metropolises of Kanpur and Lucknow is conspicuous. This denotes the dispersal of urban development in the hinterland of big towns.
- A positive shift in urban development in the districts located on the periphery of high urban development of colonial period, namely, in Aligarh, Etah and Mainpuri districts. These are the positive and welcome signs of urban developments.
- The densely populated districts namely, Faizabad, Ghazipur and Jaunpur, the district of recent agricultural development Philibhit and the district of recent large industrial development Mirzapur could not maintain their past position (Map 1-D). The possible reason may be that in those districts the high growth of population in rural areas and stagnation of old towns retarded the process of urbanisation and effectiveness of urban development.

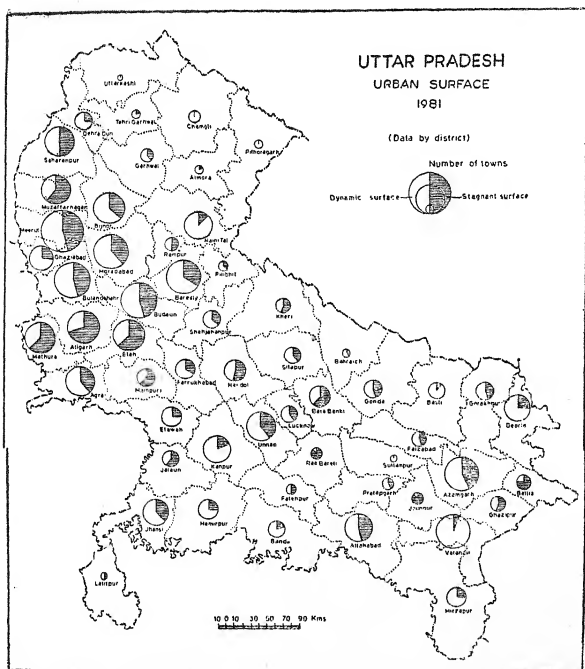
A slight improvement was registered in the case of Azamgarh district where 18 new towns emerged in 1981 as an administrative centre in the backward zone and as small industrial centres in the eastern sector of the district, an area of traditional cottage industries from very old time.¹⁵ In sum, the spatial pattern of colonial urban development remained almost unchanged during post independence period. Secondly, in Uttar Pradesh there was no dynamic area of urban developments but only dynamic urban nodes. It is well evident from the perusal of size and composition of urban surface that existed in 1981.

The Urban Surface

The urban surface of Uttar Pradesh has been worked out on the basis of total number of towns in a district that have been represented by circle (Map 2). On the basis of life cycle all the towns of 1981 have been classified into five categories:

1. Stagnant towns that maintained their life throughout the period 1901-81 but always remained as small towns. The total number of such towns in 1981 was 92.
2. Feeble towns which could not maintain their life in all Censuses and were declassified at least in one Census year numbering 195.
3. Developing or *de novo* towns that emerged during 1901-71 and maintained their life numbering 66.
4. New towns that were recorded first time as towns in 1981 numbering 185.
5. Dynamic towns which attained medium size or large town status in 1981 numbering (30+138) 168.

¹⁵K.N. Dubey, *op. cit.*, 1987.



MAP 2

All these towns of five categories constitute the urban surface of the area. The stagnating and declassified towns constitute the stagnant urban surface; and *de novo* towns, new towns and medium and large towns in 1981 constitute the dynamic urban surface. It is evident that the process of erosion and swelling worked together in colonial period. The old feudal towns stagnated and new colonial towns developed rapidly.

In about one quarter districts (11), more than half of the urban surface was constituted by stagnant and feeble towns. Such districts are mostly confined in Purvanchal and Middle Ganga-Yamuna doab. In another one quarter districts (13), the proportion of dynamic surface is more

than three quarters. Such districts are mostly peripheral districts of Uttarakhand; remote trans Ghagra district of Deoria, Mirzapur and Hamirpur districts in remote southern part of the State which were altogether neglected in colonial period but witnessed the spread of socio-economic infrastructure in the post-independence period. In the remaining districts, the proportion of stagnant and dynamic urban surface is almost equal.

On the whole, the urban surface in Uttar Pradesh has shrunk from west to east. Interestingly enough, development impulse in the State also decreased from west to east and colonial exploitation decreased from east to west.¹⁶ Hence, urban surface in the State has high positive association with post-independence development and high inverse association with colonial exploitation and colonial neglect. The association of urban surface with economic prosperity and development is reconfirmed by the fact that it is the largest in plain tract from where it decreased towards northern mountain tract and southern plateau tract which remained marginal areas in regard to development. Within the plain tract, it is the smallest in 'poverty through' located in the middle part of the State.¹⁷

CONCLUSION

The foregoing discussion clearly shows that regional disparities in urban development mounted high with the establishment of colonial economy. It remained almost stable up to 1961 in post-Independence period. Subsequently, it started to have a constant decline. Thus the hypothesis that regional disparities created during colonial days was exacerbated during post-Independence period is unenable in the case of urban development in Uttar Pradesh.

The hypothesis of convergence that regional disparities start decreasing with the process of development is also not applicable. There is no denial of the fact that stagnant colonial economy started moving up with the beginning of the First Five Year Plan. But up to 1961, for a decade, the position remained confused in regard to regional disparities in urban development. It started a gradual decline only after the advent of development planning based on equity and territorial justice. Hence regional disparities are responsive more to development strategy rather to development process as such.

Also the concentration cycle hypothesis of Williamson on regional

¹⁶K.N. Dubey, *Regional Disparities in the Levels of Socio-Economic Development in an Indian State: A Case Study of Uttar Pradesh*, Ph.D. Thesis, Department of Geography, Panjab University, Chandigarh, 1981.

¹⁷Dubey (1921, p. 212) has identified an elongated belt of acute underdevelopment running vertically through central Uttar Pradesh where the gradients of positive human forces in the west and of favourable physical conditions in the east have sloped to their lowest. He has termed this zone as poverty trough.

disparities is not applicable because in the starting of development process it remained stable and declined subsequently. Here one fact is significant to recall. The development policy in the colonial period was based on the principle of economic efficiency but in the interest of colonial masters. In early post-Independence period, it started on the same principle, but in the interest of the area. In both the cases regional disparities remained high. Thus, it is safer to conclude that regional disparities is inherent characteristic of colonial economy and development policy based on the principle of economic efficiency. It has no trade off with the development process as the regional disparities in different aspects of urban developments move with the varying speed and some times in diagonally opposite direction. The regional disparities in urban development of Uttar Pradesh have high association with the strategy of development rather with the level of development. □

Growth of Towns in Karnataka, 1961-81

N. BASKAR RAO

IN INDIA, urban population constitutes nearly 24 per cent of the total population according to 1981 census increasing from about 18 in 1961 and 20 in 1971. The annual growth rates of urban population have also increased from 2.3 in 1951-61, to 3.3 in 1961-71 and to 3.9 in 1971-81. Similar trends can be observed in several states. In Karnataka, the per cent of urban population increased from about 22 in 1961, to 24 in 1971 and to nearly 29 in 1981. The annual growth rate has also increased from 1.7 to 3.0 and to 4.1 during the three decades respectively since 1951-61. The pattern of urban growth and the factors associated with such growth processes have implications for urban planning. Keeping this in view, this paper examines the pattern of growth of towns and cities of different size classes in Karnataka. An attempt is also made to enquire into the factors associated with the growth of selected towns.

Comparability of Data and Concept

Comparability of data on urban population has been questioned for the following reasons: First, the types of local administration which make a locality automatically eligible for a town, do not seem to be the same in different censuses. It is argued that due to the lack of an unambiguous list of localities with specified local administration for applying the criterion of existence of a civic authority, certain localities could be mistakenly tested and declassified/reclassified, on the basis of criteria relating to demographic characteristics thus, leading to spurious changes in urban population.¹ Secondly, the definition of an outgrowth has not been applied uniformly across the states and within states over time. In 1971, in some states, such outgrowths were treated as separate towns; in others, they were not, but treated as urban; and in a few others they

¹M.K. Premi, D.B. Gupta and Amitabh Kundu, "The Concept of Urban Areas in 1961-71 Census", in Ashish Bose, *et. al.*, (eds.) *Population Statistics in India*, Vikas, New Delhi, 1977.

were not considered as urban at all.² The third source of ambiguity is with respect to the non-agricultural activity. It is not clear whether or not the 75 per cent non-agricultural activity is among the "adult male working population", "male working population" or "working population". Different census reports specify one of these three variants and sometimes two variants are found in the same census report.³

In Karnataka, the criteria used for declassification and reclassification are not the same from one census to another. Though, several localities are affected by such classification, the population involved is not large. A high proportion of urban population is from towns that are relatively large and stable, continuing from one census to another. Secondly, it is not clear how relevant is the stipulation of certain proportion of non-agricultural activity (male or both sexes, adult or total population), since most of the census towns in Karnataka are so on the basis of criterion relating to the existence of local government authority, with very little scope for application of criterion relating to demographic characteristics. Many census towns in Karnataka with less than 20,000 population which have become towns on the basis of existence of local authority, have more than 25 per cent of workers (M+F, all ages) in agriculture which in fact run counter to the criterion for the nature of work force. Thirdly, outgrowths in Karnataka are treated as part of urban agglomeration in 1981, and not in 1971. However, since the population of outgrowths are shown separately, required adjustments could be made in the data. In the case of Bangalore, Mysore, and Hospet urban agglomerations, the 1981 territorial limits have been kept constant and the populations are adjusted accordingly for 1971 and 1961, in order to make the growth rates comparable.

Changes in the Number of Towns

Given the census criteria for classifying the localities into rural and urban, the number of towns keeps changing from one census to another. The main sources of change in the number of towns are: declassification, emergence of 'new' towns, merger of towns with the adjoining town or city and sometimes merger of towns with one another. Some of the towns in the earlier censuses are declassified as rural, while other localities become eligible for being classified as towns. 'The new' towns might have been towns earlier and declassified as rural in subsequent census or they might be really new towns which had never been towns earlier. In addition to these two sources of change in the number of towns, a third source is the merger of some towns with a city, an urban agglomeration or a town group. In the

²M.K. Premi, D.B. Gupta and Amitabh Kundu, *op. cit.*

³*Census of India 1971, India, Part II—Ai, General Population, Tables, p. 42.*

boundary adjustments of some major cities/agglomerations made from time to time, some of the nearby old towns or reclassified new towns are merged with the main city or agglomeration, and these towns lose their independent identities. Further, there are 'outgrowths' which are the physical extensions of an agglomeration or of towns forming part of the agglomeration. These outgrowths form part of the urban set-up though they are not, as independent entities, towns in the strict sense.

In 1961 in Karnataka, 85 towns of 1951, all of them with less than 10,000 population in 1961 were declassified. In addition, there was a loss of 3 towns : one due to merger with Belgaum city and four towns were reduced to two due to merger. Seventeen of these 85 declassified localities were temporary labour camps of Tungabhadra project. Most of these declassified towns were in the districts of Belgaum, Bijapur, Dharwad and Raichur. As against this, 30 localities became new towns in 1961 and seventeen of them were merged with the nearby major cities. In 1971, 15 towns were declassified/merged and 29 new towns emerged. In 1981, 13 towns were declassified/merged as against 46 new towns.

New Towns

It is of interest to examine the status of new towns. One would expect that with economic development new towns would emerge and reach viable population sizes in course of time. Emergence of new towns is important from the point of view of a balanced distribution of urban population. In all, in the three census years since 1961, as many as 105 new towns emerged. Thirtyfour per cent of these towns were in the vicinity of large cities and hence got absorbed into the agglomerations or town groups. Another seven per cent of these new towns were declassified as rural in subsequent censuses. Of the remaining 62 independent towns, 23 (22 per cent of 105) had been towns in the past and declassified later and only 39 (37 per cent of 105) were really new towns. Except a few, most of the new independent towns are with less than 20,000 population. Because of these reasons the contribution of new towns to the urban population of the state is practically negligible (Table 1).

Population and Number of Towns According to Size Classes

Depending upon the population size and growth rates, towns generally move from the lower to the upper size classes. As a result of this upward mobility and with only small additions to the population in the lower size classes contributed by new towns, there is a growing concentration of population in the upper size classes. For example, in 1961, among the population living in urban localities, about 40 per cent resided in cities with population of 1,00,000+ and this increased to about 50 and nearly 60 per cent in subsequent decades (Table 2). Similarly, the share of towns with 20,000 population and above increased

TABLE 1 PER CENT OF POPULATION IN OLD AND NEW TOWNS

Towns continuing from the preceding census/ new towns	Per cent of Population in		
	1961	1971	1981
1. Towns in preceding census continuing in the next census	93.9	95.9	92.8
2. New towns:			
(a) Merged with city/ UA/TG	1.7	1.3	0.7
(b) Towns declassified in earlier censuses	2.5	1.4	1.4
(c) Towns for the first time	1.8	1.3	2.2
3. Outgrowths	—	—	2.9
Population of all towns	5,266,493	7,122,093	10,729,606

NOTE: 1. Refers to 1961 population of 1951 towns excluding those declassified in 1961; 1971 population of 1961 towns excluding those declassified in 1971...etc.

2. (b) These were towns in earlier censuses, declassified later and again reclassified as towns in the census years of 1961, 1971 and 1981.

(c) Towns that were never towns in earlier censuses.

3. Outgrowths are part of agglomerations: Bangalore, Mysore, Mangalore, Hospet and Belgaum. Out of these five, Bangalore accounts for more than three fourths of the total population in outgrowths.

from about 70 in 1961 to 75 in 1971 and 83 in 1981. In 1981, the population living in towns with population of 20,000+, as per cent of the total population of the state was about 24 per cent—quite close to the figure of 29 per cent urban. In other words, the growth of large towns (20,000+ population) determines to a large extent the growth of total urban population and its proportion in the state. Most of these large towns are old towns continuing from the preceding censuses.

Towns in the upper range of a size class would obviously find it easier to reach the next higher class than those in the lower range. Hence there is no need to go into the details of the towns that changed the size classes. However, a few illustrative examples can be cited. Bangalore agglomeration continues to be the only 'million' city and it is less likely for any other city to reach this mark in the near future. The second largest city of Hubli-Dharwad is well behind with only 18 per cent of Bangalore's population. All the nine towns of 1961—Gulbarga, Bellary, Bijapur, Davangere, Gadag-Bettigeri, Bhadravathi,

TABLE 2 PER CENT OF POPULATION IN TOWNS
ACCORDING TO SIZE CLASSES

(Population in respective size classes)

Population size classes ('000)	Per cent			Cumulative Per cent		
	1961	1971	1981	1961	1971	1981
1000+	22.9	23.2	27.2	22.9 (1)	23.2 (1)	27.2 (1)
100—1000	18.3	27.8	31.4	41.2 (6)	51.0 (12)	58.6 (17)
50 — 100	12.6	8.2	6.4	53.8 (15)	59.2 (21)	65.0 (28)
20 — 50	15.9	15.4	17.7	69.7 (45)	74.6 (59)	82.7 (92)
10 — 20	19.8	19.3	13.7	89.5(122)	93.9(158)	96.4(192)
5 — 10	8.0	4.7	2.9	97.5(179)	98.6(204)	99.3(234)
< 5	2.4	1.2	0.6	99.9(214)	99.8(230)	99.9(250)

NOTE: 1. Agglomerations and town groups shown as single units.

2. Figures in parentheses are cumulative number of towns.

SOURCE: *Census Reports of Karnataka 1961-1981.*

Shimoga, Raichur and Hospet—in the 50-99 thousand size class, crossed the 100 thousand mark in 1981. A few cities crossed one size class in each decade as in the cases of Tumkur and Mandya which were in the size class of 20-49 thousand in 1961, crossed 100 thousand in 1981. Similarly to these two towns, the fast growing Gangavathi in the 10-19 thousand class in 1961, crossed 50,000 in 1981.

Changes in Ranks of Towns

As in the case of movement of towns across the population size classes, individual towns and cities change their positions or ranks depending upon their growth and the relative sizes of initial population. Eightynine towns of 1981 with population of 20,000+ and which were also in existence in 1961 (but in any population size classes) were ranked in descending order of population size in 1961 and 1981 separately. Among these, only nine towns maintained the same ranks during the past two decades, while others have changed their ranks, some of them substantially. Seventeen towns improved their ranks by 10 steps or more. Significant among them are: Dandeli which improved its rank from 72 to 29, Challakere from 116 to 72, Manvi from 130 to 84, Sindhnur from 125 to 64 and Gangavati from 48 to 24. On the other hand, 14 towns lost ranks by 10 steps or more. For example, Karkal lost rank from 65 to 85, Kumta from 58 to 77, Gajendragad from 68 to 87, Shorapur from 51 to 66, etc.

Population Growth

The pattern of population growth by the size classes of towns is

important from the point of view of industrial location and planning for more balanced urban growth. Estimation of growth by size classes is done either: (i) by considering the towns in respective size classes in each census year, or (ii) by considering only the towns in the size classes of the preceding census and estimating their growth irrespective of their size classes in the next census. These two methods give different results.⁴ In the first method, growth rates are affected by the movement of towns into and out of the size classes and also by declassification and emergence of new towns during the decade (s). Hence the second method is appropriate for comparing growth rates by size classes and this is used here.

Table 3 presents growth rates by size classes during the past two decades. The rates for 1961-71 and 1971-81 are based on 204 and 216 independent towns respectively.⁵ Agglomerations and town groups are shown here as single units along with merged towns. Since population growth rates are generally for comparable boundaries, wherever necessary the populations of agglomerations and town groups have been adjusted for 1981 boundary.⁶

⁴K.B. Suri, "Towns : Size, Economic Structure and Growth", *Economic and Political Weekly*, August 10, 1968; R.B. Ram, "The Process of Urbanisation in Bihar 1951-71", *Demography India*, 3(2), December 1974; Pravin and Leela Visaria, "Indian Population Scene After 1981 Census, A Perspective", *Economic and Political Weekly*, Vol. XVII, Nos. 44-46, Special Number, 1981; Rakesh Mohan and Chandra Sekhar Pant, "Morphology of Urbanisation in India, Some Results from 1981 Census", *Economic and Political Weekly*, Vol. XVII, Nos. 38-39 September, 18 and 25, 1982.

⁵Out of 214 independent towns (not part of UAs/TGs of 1961) 8 were declassified as rural in 1971 and two towns, Amaravati and Someshwar were merged with Hospet and Mangalore UAs respectively in 1981. The populations of these merged towns are included in those of the UAs which are considered as single units. Thus the 1961-71 growth rates are based on 204 towns.

Out of these 204 towns, five were declassified as rural in 1981. In 1971, 23 independent towns emerged, of which six were declassified/merged in 1981, leaving a net addition of 17 towns up to 1981. Hence the growth rates for 1971-81 are based on 216 towns of 1971 which continued as towns up to 1981.

⁶Census reports provide populations of towns and agglomeration adjusted for the latest boundary only in those cases where, a town merged in a particular census year was also a town in the preceding census. In other cases, i.e., when towns merged in a year were villages earlier and when outgrowths are involved, populations had to be adjusted. In such adjustments, the constituent localities of an UA including the new localities/outgrowths merged in, 1981, are considered to be part of the UA in 1971 and 1961 as well, even if these (merged) localities were rural in the earlier censuses, and the populations of these merged localities are added to those of UAs in the respective census. Such adjustments based on 1981 boundary were made in the case of four UAs: Bangalore, Mysore, Mangalore and Hospet. The urban population in all size classes presented in Table 3 are for only comparable towns and include adjusted population for four agglomerations. Hence these are different from the populations reported in the censuses, which are: 5,266,493; 7,122,093; and 10,729,606 for 1961, 1971 and 1981 respectively. The annual growth rates based on unadjusted censuses populations are: 3.0 and 4.1 per cents respectively for 1961-71 and 1971-81.

TABLE 3 POPULATION GROWTH BY SIZE CLASSES,
1961-71 AND 1971-81

Population size classes ('000)	1961-71		1971-81	
	No. of towns	Growth rate p.a. (%)	No. of towns	Growth rate p.a. (%)
I. 100+	6	3.59 (2.76)	12	4.08 (3.23)
II. 50-100	9	3.45	9	3.60
III. 20-50	29	2.97	28	3.16
IV. 10-20	76	2.45	94	2.85
V. 5-10	50	2.57	42	2.64
VI. <5	34	2.04	21	2.87
20+	44	3.43 (3.02)	59	3.85 (3.27)
<20	160	2.45	157	2.82
All size classes: Towns	204	3.15	216	3.62
Population 1961 & 71 1971 & 81	5,165,092	7,095,464	7,226,235	10,344,312

- NOTE: 1. Figures in parentheses exclude Bangalore U.A.
 2. Agglomerations or Town Groups treated as single units.
 3. Growth rates are estimated for the same towns of the preceding census, irrespective of their size classes in the next census.
 4. The total urban populations in the last row are adjusted populations and hence different from the census population, see footnote 2.

SOURCE: *Census Reports for Karnataka, 1961-1981.*

It can be seen from Table 3 that the class I towns have registered the highest growth in both the decades, and the rates decline from the upper to the lower size classes with the exceptions of class V towns in 1961-71 and class VI towns during 1971-81. The higher growth in class VI than in class V during the last decade is to a certain extent due to the very high growth in the new town of Wadi ACC.

In the case of class I towns, however, it must be stated that the high growth is due to the large and growing proportion of population in Bangalore. Excluding Bangalore UA the growth rates are lower, lower than that of class II and III during 1961-71 and of class II during 1971-81. If we classify the towns into two broad groups with population of 20,000 and more, and less than 20,000, as is generally done, the bigger towns have slightly higher growth rates than the smaller towns, though exclusion of Bangalore would narrow down the differences, particularly during the last decade. This does not mean, however, that population

size influences growth rate.

These growth rates by size classes presented in Table 3 are aggregate growth rates in the sense that the population of all the towns in each size class are taken together as aggregates. Towns within a size class vary in size and growth, and hence it is necessary to examine the mean growth rates of individual towns and also the variability in growth across size classes and overtime.

It can be seen from Table 4 that the mean growth rates are the highest in class II towns. Among towns with less than 100 thousand population, the pattern of mean growth is somewhat similar to that of aggregate growth, i.e., smaller towns showing lower growth rates than bigger towns, with a few exceptions. Towns with 20 thousand and more population grow faster than those with less than 20 thousand population, though the differences are not large.

Variability in growth is useful in understanding the stability of growth rates among the towns. Smaller towns, which are generally not multi-functional, are expected to exhibit higher variability since population growth could fluctuate depending upon the fortunes of one or two functions on which these towns depend, while in the larger towns, diversified economic activities could act as cushion against sudden fluctuations in growth and hence produce less variability (UN 1980). International comparison of cities with population of 1,00,000+, show that the standard deviation in growth is less among large and more among the small cities.⁷ In Karnataka, however, the coefficients of variability do not show any consistent pattern according to the size classes in either decade, though the variability among class I to class IV towns has declined considerably overtime.

Regression analysis was tried to identify the factors determining the growth of individual towns using variables such as, initial population size (log), initial per cent of male workers in primary sector, per cent change among male workers in non-household manufacturing, in tertiary sector and also a dummy variable on taluk level development. Population size (log) consistently did not show any effect on the growth of towns. But by and large the regression results, particularly those pertaining to economic variables, were not satisfactory. Much of the data on towns that could be quantified are not free from the "population effect" and could not capture the economic significance of individual towns. For example, during 1961-71, per cent change in employment in tertiary sector *per se* had a high positive and significant effect on growth of towns, yielding an R^2 of 77 per cent for the large towns (20,000+ population) and 31 per cent for small towns. However, it is

⁷United Nations (Department of International Economic and Social Affairs), *Patterns of Urban and Rural Population Growth*, Population Studies No. 68, U.N., New York, 1980.

TABLE 4 MEAN GROWTH RATES AND COEFFICIENTS OF VARIABILITY, 1961-71 and 1971-81

Population size classes ('000)	Mean Growth Rate p.a. (%)		Co-efficients of variability (%)	
	1961-71	1971-81	1961-71	1971-81
I. 100+	2.60 (2.28)	3.49 (3.36)	85 (100)	33 (41)
II. 50-100	3.37	3.62	32	23
III. 20-50	2.66	3.02	61	43
IV. 10-20	2.33	2.77	51	42
V. 5-10	2.47	2.58	41	41
VI. <5	2.01	3.31	59	95
20+	2.80	3.21	58	38
<20	2.30	2.79	49	56
All size classes	2.41	2.90	53	51

NOTE: 1. Figures in parentheses exclude Bangalore U.A. The increase in variability after excluding Bangalore is mainly due to negative growth in K.G.F. during 1961-71 and low positive growth during 1971-81, and also low growth rates in Mangalore during both the decades. The growth rates in other towns are somewhat similar to Bangalore.

2. For class VI towns during 1971-81, the mean growth rate and the co-efficient of variability excluding Wadi ACC, are 2.73 and 63 per cent respectively.

hard to interpret such results in view of the possible reverse effect of population growth on tertiary sector employment. When absolute decadal changes in the per cent of workers in non-household manufacturing and in tertiary sector were used, the R^2 values were much lower, particularly for small towns. The consistency of the relationship during the 1971-81 decade could not be checked because of lack of required data for towns with less than 100 thousand population. Further, given the disparity in the growth of towns within districts, using district/taluk level data to explain variations in growth requires unrealistic assumptions regarding the volume and source of immigration to towns. It may perhaps be useful to present a descriptive account of the factors that might have contributed to the growth of selected towns.

Profiles of Selected High Growth Towns

During 1971-81, among towns with less than 100 thousand population in 1981, the growth of 28 towns had been more than four per cent, higher than the state average. Among these, four towns had to be eliminated since their growth rates were mostly due to extension of municipal limits. For the remaining 24 towns, the growth rates since 1951, population

size in 1981, and workers engaged in cultivation and agricultural labour as per cent of total main workers in 1981, are presented in Table 5.

TABLE 5 PROFILES OF SELECTED HIGH GROWTH TOWNS

Towns	Workers in agri. (%), 1981	Pop. 1981 (‘000)	Growth rate p.a. per cent		
			1951-61	1961-71	1971-81
1 Mudalgi	75	17.8	—	—	5.27
2 Manvi	64	21.3	1.00	4.64	4.32
3 Siruguppa	59	23.3	—	—	4.53
4 Sinda	48	15.8	—	—	4.44
5 Sindhanur	46	25.9	2.30	4.12	5.97
6 Banavar	45	6.6	1.38	2.02	4.08
7 Gangavathi	45	58.7	1.57	5.94	5.32
8 Mulbagal	29	26.8	2.83	3.14	4.91
9 Pavagada	26	14.4	2.78	4.17	4.76
10 Shravanabelagola	23	5.4	1.05	1.15	4.09
11 Anekal	16	19.3	1.23	1.67	4.26
12 Sira	15	27.7	2.35	1.70	4.17
13 Chennapatna	14	50.7	1.00	2.06	4.46
14 Nanjangud	13	34.9	0.50	2.47	4.40
15 Harihar	12	52.3	3.60	3.92	4.38
16 Shahabad (m)	12	38.8	2.12	1.40	5.03
17 Kolar	11	65.8	1.82	2.85	4.20
18 Chennarayapatna	9	16.3	1.78	3.95	4.63
19 Karwar	7	47.2	1.90	1.49	5.35
20 Bidar	6	78.9	0.34	4.43	4.46
21 Bangarpet	4	22.6	1.06	2.60	4.28
22 Audityapatna (Ammasandra, ACC)	1	3.0	—	—	6.63
23 Dandeli	1	47.6	—	5.60	6.33
24 Wadi ACC	*	3.3	—	—	14.88

- NOTE: 1. Only those towns with less than 100 thousand population in 1981 and which have grown by more than four per cent during 1971-81 are presented here. Saundatti-Yellamma, Vijayapura, Yellapur, and Gonikoppal are excluded since the areal extensions of these towns are substantial and no adjustment could be made for making the population comparable.
2. Per cent of workers in agriculture (cultivation + agricultural labour) and population are rounded off to the nearest decimal.
3. —Not a town in two consecutive censuses;
*Negligible.

Available data do not provide clues to the growth of each and every town presented in the Table, but certain broad patterns emerge: one is related to the effects of the agricultural development due to large scale

irrigation projects and the second is the recent establishment of industries and/or expansion of industrial capacity.

Irrigation Projects and Agricultural Development

Irrigation and the consequent increase in the scale of agricultural production and development, especially the type of integrated development promoted by the Command Area Authority, have implications for the growth of small towns. Such development, in addition to providing water for irrigation and sometimes power as well, involves provision and development of infrastructural facilities such as road networks, warehousing facilities for agricultural produce as well as agricultural inputs, regulated markets, financial and marketing institutions, servicing and repair centres for agricultural implements, etc. These infrastructural developments in small towns, give an impetus to the growth of trade and commerce, agro and ancillary industries. Availability of power will sustain, expand and diversify this industrialisation process. This process gives rise to greater demand for labour and skills of various types, leading to in-migration into towns. There are indications that the growth of some towns in Karnataka is due to this type of development.

The Tungabhadra dam located near Mallapuram, on the borders of Bellary and Raichur districts of Karnataka, was started in 1945 and water for irrigation was made available since 1953. Hydro power from the Munirabad Power house started flowing in 1963. This project has benefited (in addition to some taluks in Andhra Pradesh) Sindhur, Manvi, Gangavathi and Raichur taluks in Raichur district, and Siruguppa, Hospet and Bellary in Bellary district. Sindhur, Gangavathi and Manvi towns which are the headquarters of the respective taluks have grown substantially since 1961, though their growth was just average or marginal during 1951-61 (Table 5). Similarly, Siruguppa town which was declassified in 1961, has registered impressive growth during 1971-81. Data on agricultural production, marketable surplus, infrastructural and other developments indicate that the growth of these towns is primarily due to the effects of the irrigation project, though the actual linkages could be examined only through a more detailed field study. Similarly, the growth of Nanjangud during 1971-81 can be attributed to the Kabini irrigation and power project, though the full potential of this project is yet to be realised. The growth of Chennarayana is also linked to the Hemavathi reservoir project, but mainly due to the influx of people engaged in canal construction activities.

Industries

The growth of some other towns is due to the recent establishment and expansion of industries. Ammasandra ACC in Tumkur district was a new town in 1971 and has grown quite rapidly (Table 5) mainly due

to the establishment of a cement factory in 1962 the capacity of which was expanded in 1966. Wadi ACC and Shahabad ACC are important cement towns in Gulbarga district, and these are contiguous to the towns of Wadi (a new town of 1981) and Shahabad. In Wadi ACC, the factory was established in 1968. It became a town in 1971 and during the following decade its population increased substantially (Table 5). In Shahabad ACC, the cement factory is actually old, established in 1925, and expanded and modernised in the 1930s, though recently the factory has obtained licence for the manufacture of engineering goods. While Shahabad ACC has grown by 3.1 per cent during 1971-81, the nearby Shahabad (m) has grown by 5 per cent (Table 5) which is possibly due to industrial expansion and diversification at the peripheries. Ammasandra ACC and Wadi ACC are really small towns with very high growth rates. It is doubtful whether this tempo of growth will be sustained in the next decade.

Dandeli which was an important centre for plywood during the 1940s, became industrially more vibrant and diversified since 1955 when electric power from Jog was made available. Production of ferro-manganese was started in 1957, and expansion in capacity and diversification took place in 1962 and in 1975. A large paper mill was established in 1956 and production started in 1958, and since then considerable expansion had taken place. Dandeli became a town in 1961 and its growth has been quite rapid since then (Table 5).

Davangere and Harihar, the former with nearly 200 thousand population, are major industrial centres in Chitradurga district. Both these towns have maintained fairly high growth rates since 1951. In Harihar (Table 5), a beginning in industrialisation was made in 1941 when machine tools and lathes were manufactured. Later, with the establishment of Harihar Polyfibres and other industries, the town has become an important industrial centre. Unlike Harihar, Karwar in Uttar Karnataka district, is not a major industrial centre. However, developmental activities relating to the construction of a major port and the recent establishment of industries, such as the caustic soda and chlorine production plant in 1975, must have contributed to its growth during 1971-81.

SUMMARY

In Karnataka, in the past three census years 105 new towns emerged, but their contribution to urban population has been negligible. A very high proportion of urban population is from towns, especially those with 20,000 or more population, which have been stable from one census to another. However, from the point of view of balanced urban growth, the emergence, growth and survival of new towns, their econo-

mic vicissitudes, dependence on dominant towns and their potentialities for development, require a more detailed analysis.

Among 204 and 216 comparable towns in 1961 and 1971 respectively, the average annual aggregate growth rate increased from 3.1 to 3.6 during the past two decades. The mean growth rate has also increased from 2.4 to 2.9 indicating that more towns have experienced higher growth in the last decade as compared to the preceding decade. During this period the variability in growth has declined quite sharply except among class V & VI towns. Though the number of towns has been generally stable overtime, their relative ranks with respect to their population sizes, are hardly stable. Some towns have gained in ranks quite substantially while others lost their ranks considerably.

Regression analysis shows that initial population size (log) has no effect on the growth of towns. However, regression analysis could not throw much light on the determinants of growth. The reasons for the rapid growth of selected towns are examined in a descriptive manner. Though the growth of each such town is difficult to explain, agricultural development due to large scale irrigation, and recent establishment, expansion and diversification of industries, appear to have contributed significantly to the growth of some towns. The dynamics of irrigation, agricultural development and urban growth is particularly interesting, and the extent and nature of linkages involved in this process deserve to be examined through a detailed field study. □

Slums or Resettlement Colonies?

GIRISH K. MISRA

THE MASSIVE concentration of migrant population from the impoverished countryside in the big cities of India to earn a livelihood in the poverty induced informal service sector of the urban economy results in proliferation of slums and squatter settlements. This abnormal growth rate of urban population coupled with the unplanned or haphazard expansion of city boundaries leads to environmental pollution and ecological degradation at the macro-structure due to the lack of adequate infrastructural and service facilities to provide a decent living to the poor in urban areas.

It is not that the Government is quite unaware of the problem. On the contrary, since the introduction of the First Five Year Plan in 1951, the Government of India has invested a considerable sum of money for the planned development and growth of cities and towns through its various programmes and policies. However, despite all these efforts the problems of poor and hapless migrants from the countryside have got aggravated overtime and due to certain anomalies at the stage of policy formulation and programme implementation, the problems of slums and squatter dwellers relocated in resettlement colonies of a planned city have remained unsolved for years together.

In view of the foregoing, the present study on resettlement and rehabilitation of poor and distressed migrants in Delhi is carried out to assess their present socio-economic conditions after their stay in the resettlement colonies for about a decade. An effort is also made to compare their living conditions with the ones existed before and after their coming to resettlement colonies in 1977-78. Certain short-term and long-term measures have been made by the Government to improve the living conditions of the resettlers and squatter dwellers by redesigning the city ecology structure in a planned manner and also by providing basic infrastructural and service facilities in their neighbourhood to generate adequate employment opportunities for them. Further to stifle the menacing rate of population growth in big and metropolitan cities of the Third World, which results in peripheral degeneration, cumulative ecological degradation, and pauperisation of the countryside consequent

upon the exertion of backwash effects by the centre on its periphery, new ways and means are to be devised by our urban planners and architects.

The study is mainly confined to four resettlement colonies established during the national emergency period. In order to assess the changes and improvement or deterioration, if any, in the living conditions of the resettlers after a period of ten years of their habitation in these localities, the same 315 households which were surveyed by the previous IIPA study¹ were resurveyed in 1984-85. With the help of a structured interview schedule, data relating to four aspects were collected from the heads of the select households: (i) socio-economic background of respondents and their household members, (ii) the availability of select socio-economic facilities to households, (iii) the views of the respondents on improvement/deterioration in their living conditions and environmental surroundings during the past ten years, and (iv) suggestions to improve social and economic conditions in resettlement colonies.

The question of availability of socio-economic facilities is examined in a variety of ways. In the case of public transport, the accessibility is worked out in terms of: (i) distance of the place of employment, (ii) time spent on going to the place of employment, (iii) expenditure incurred on transport *vis-a-vis* the earning capability of resettlers, and (iv) perception of respondents regarding the regularity of service.

The availability of water supply is examined in terms of: (i) distance from the public standpost, and (ii) perception about the adequacy of supply as reported by the respondents. As for sewerage and sanitation, their accessibility is mainly examined in terms of distance from respondent's house and his perception of the adequacy of these services.

The availability of electricity supply is examined in terms of: (i) number of street light points, (ii) number of houses supplied with domestic connections, and (iii) the perception of respondents regarding power cuts, power breakdowns, etc.

In the case of health, its availability is subject to the distance from a clinic or dispensary. Regarding the availability of market, education, recreation and post and telegraph facilities, distance is again taken as a measuring parameter.

SOCIO-ECONOMIC CHARACTERISTICS

The educational background of the 315 respondents in the sample indicates that 31.43 per cent of them are illiterates, 30.79 per cent possess only primary school education, 18.73 per cent middle school education, 10.79 per cent high school education and 4.44 per cent higher

¹Girish K. Misra and Rakesh Gupta, *Resettlement Policies in Delhi*, New Delhi, Indian Institute of Public Administration, 1981.

secondary or intermediate level education. The percentage of graduates and post graduates is only 3.81 and none of the respondents in the sample is found to have a technical background of education. As compared to the situation prevailed in 1977-78, the overall literacy level has improved in these four resettlement colonies. For example, the percentage of illiterates has gone down from 42.8 to 33.79. However, in Khyala Complex, the illiteracy percentage has further accentuated from 33.33 to 46.67 whereas in other resettlement colonies it has reduced appreciably.

In the sample, the highest number of respondents is found to have employed in the unskilled and semi-skilled category of jobs which together constitute 30.49 per cent. The skilled category of respondents constitutes only 10.16 per cent of the sample, other occupational categories being professional, lower level (29.53%) housewife (13.65%), shop owner/artist, etc., (13.33%), unemployed retired (2.22%) and student (0.63%). Compared to the situation prevailed in 1977-78, the percentage of unskilled workers has reduced from 24.76 to 13.96 whereas the percentage of semi-skilled (5.71 to 16.5) and skilled workers (10.16 to 44.5) has gone up.

The average monthly income of respondents is Rs. 592.86 and the modal income falls within the range of Rs. 501 to 750. However, the respondents belonging to Patparganj Complex have a fairly higher level of average income per month (Rs. 636.83) than the sample as a whole. The lowest average monthly income is reported in Khyala Complex where the respondents are found to be educationally more backward and the percentage of unskilled workers and semi-skilled workers is very high.

As compared to the average monthly income of the respondents (Rs. 592.86), the average monthly family income in the sample is Rs. 865.16 (Table 1). Moreover, it is to be noted that the average monthly family income in all the four resettlement colonies is higher than the average monthly income of the respondents in respect of these colonies. This indicates that among the 315 families surveyed in the four resettlement colonies, there are also additional earning members other than the respondents to supplement the family income. Nonetheless, like the case of modal income of respondents, the average monthly modal income of the families is also reported to be in the range of Rs. 501 to Rs. 750. Hence, it can be concluded that not all families in the sample have got the advantage of having an additional earning member besides the respondent.

The main purpose behind the relocation of the squatter dwellers in different resettlement colonies in Delhi is to enable the distressed migrants from the countryside to have a comfortable living with a steady flow of income. However, in the earlier study on these resettlement colonies conducted by Misra and Gupta, it was found that the families

of squatter dwellers registered a fall in their monthly income after shifting to the resettlement colonies due to a decline in the average number of earners in the family. But the findings of the present study on income reveal that after their ten years of stay in the resettlement colonies, the sample households have registered a rise in their average monthly income (Rs. 865.36) as compared to the average monthly income (Rs. 386.82) of the families while residing in squatter settlements. However, computed in terms of constant prices with 1977 as base year, the average monthly income of the family comes to Rs. 605.75, thereby indicating an increase in income of the resettlers as compared to their squatter days considering an inflationary rate of around five per cent per annum in the economy. Though there has been some perceptible change in the real income of squatter dwellers over a period of ten years but immediately after coming to the resettlement colonies their average monthly family income declined particularly due to loss of employment opportunities to their womenfolk. Also, the average number of earning members in the sample is, more or less, same at present (*i.e.*, 1.35) compared to the situation existed in 1977-78 (*i.e.*, 1.32).

In the sample of 315 households in our select resettlement colonies, the following three categories of households were found at the time of survey:

- (i) Original resident of the resettlement colonies who were shifted from their squatter settlements during the period of emergency;
- (ii) Outsiders who were not squatter dwellers but purchased houses in the resettlement colonies subsequently from the original allottees; and
- (iii) Outsiders who were not residing in squatter settlements but took houses on rent from the original allottees of plots and houses in the resettlement colonies.

Out of 315 households in the sample it is noticed that 58 (18.41%) households residing in the select resettlement colonies at present were not the squatter dwellers who were shifted to these localities during the period of emergency. Among these, 29 households (9.21%) have purchased the tenements from the original allottees and the remaining 29 households (9.21%) have taken tenements on rents from the allottees of plots in resettlement colonies. The percentage of *benami* transaction by the original allottees is more than 14 per cent in the case of Nandnagri as well as the number of tenements given on rent (16%).

AVAILABILITY OF SERVICES

The availability of services and amenities in terms of social and spatial

accessibility to the community depicts the real state of civic infrastructures. It is quite possible that despite a high level of availability, a specific service is not spatially accessible to the people due to long physical distances. Moreover, people may not be well aware of the availability of particular services due to their social inaccessibility. The present section probes into the availability of services like public transport, water supply, sewerage, electricity, health, education, housing, post and telegraph, recreation and market from these different angles.

Public Transport

Since the people residing in the resettlement colonies belong to the economically and socially weaker sections of society, for them public transport system is the main source of travel for various purposes in big city like Delhi. As such the views of resettlers on the public transportation system, in general, have been covered.

Distance Travelled: It is seen from Table 1 that the average distance covered by the respondents in the sample of select resettlement colonies is 8.07 km to reach their place of employment which is certainly an improvement over the situation that existed in 1977-78² when it was 11.8 km. However, the average distance travelled by these resettlers while residing in squatter settlements was 3.4 km only.

Modes of Transport: Out of the total of 315 respondents in the sample a majority of them either use public transport (33.33%) or their own bicycle (23.79%) for going to their place of work. Only 19.36 per cent of the respondents go to their place of work on foot particularly the ones who are employed in nearby localities within a radius of three to five km. The average time spent by 315 respondents is 36.72 minutes and among them about 45 per cent take more than 40 minutes to reach their place of work. In 1977-78, the average time was 64.06 minutes in this regard.

Monthly Expenditure on Transport: The average monthly expenditure incurred by the respondents while going to their place of work comes to Rs. 15.40. This, of course, varies from locality to locality. It is Rs. 17.10 in the case of respondents residing in Patparganj Complex whereas in Nandnagri it comes to 8.80 only. The monthly expenditure, however, used to be very small sum, i.e., Rs. 9.22 before coming to these colonies from squatter settlements.

Frequency of Buses: There are 82 buses originating from the select four resettlement colonies in an hour. Among them, the largest number of buses (26) covers the localities like Karol Bagh, Pahar Ganj, Kamla Market, Anand Parvat, etc., followed by the buses (16) going towards Kendriya terminal. The lowest number of buses (2) plies in the direction

²Girish K. Misra and Rakesh Gupta, *op. cit.*, 1981.

of Connaught Place, which originate from Mangolpuri resettlement colony only. Besides, there are 10 buses originating from various other localities which cover Mangolpuri on their way while plying to the places like Railway Station/Red Fort/ Jama Masjid, Inter State Bus Terminal and Karol Bagh Terminal every hour. In 1977-76 there were only 27 buses originating from these colonies whereas the total number of such buses has been raised to 82 now.

Regularity of Public Buses: Regarding the regularity of the bus service in the select resettlement colonies, a majority (85.2%) of the respondent considers buses in their localities either mostly regular or always regular. At the time of living in squatter settlements and immediately after coming to resettlement colonies in 1977-76, 44.77 per cent and 16.82 per cent respondents considered the bus service to be mostly regular or always regular

Water Supply

The resettlement colonies irrespective of their year of establishment are well known for the inadequate supply of water. None of the houses in the select resettlement colonies possesses municipal water connections. The chief source of water supply in these colonies is public stand post (67.62%) whereas the rest draw water from the handpumps. In the sample cent-per-cent households get water from the public stand posts in Khyala Complex where the percentage of households in this respect is as high as 99.2 in Mangolpuri.

Public Stand Posts: A majority of households (63.17%) draws water from a distance of less than 50 metres, the average distance of public stand posts from the sample households being 59.47 metres. This distance used to be 71.69 metres in 1977-78. Public stand posts are generally located away from their residence and mostly remain out of order and overcrowded. Administrative problems stated to be the main reason for not getting municipal water connections; others do not get them due to financial and technical reasons like non-availability of the main pipeline for domestic connections.

Sewerage

All the households in the sample avail themselves of public latrine facilities as private latrines are not attached to their houses. The average distance of public latrines from the residence of resettlers is as high as 91.72 metres. Everybody in the sample prefers to have flush type latrines in his locality and also he is ready to pay for the service charges. Whereas in 1977-78, 96.76 per cent households had access to public latrines, the percentage was 77.14 at the time of their residing in squatter settlements.

Electricity

The provision of electricity facility in the resettlement colonies seems to be satisfactory. A majority of the sample households (84.76%) possesses domestic connections of electricity and their percentage does not differ much over select colonies. In 1977-78, no select resettlement colony had the electricity facility whereas at the time of residing in squatter settlements, the percentage of households having domestic connections was 94.22.

The frequency of power cuts or load shedding in the select colonies at present is 'sometime' according to a majority (89.84%) of respondent. Whereas in 1977-78, 38.46 per cent experienced power cuts 'sometime', 81.25 per cent had similar experience while dwelling in squatter settlements. Voltage fluctuation, on the other hand, has been considered frequent by 21.9 per cent respondent in the sample. In 1977-78, 30.77 per cent households reported voltage fluctuations being frequent whereas at the time of dwelling in squatter settlements the figure was stated to be 6.25 per cent.

The average monthly expenditure on electricity comes to Rs. 21.17 for the sample. In 1977-78, the average monthly expenditure on electricity was Rs. 13.73 as compared to Rs. 12.97 when the respondents were living in squatter settlements.

Health

In terms of the average distance travelled by respondents (*i.e.*, 0.58 km) to avail themselves of health facilities in four resettlement colonies, the situation is fairly satisfactory. In 1977-78 also the position was, more or less, the same, (*i.e.*, 0.53 km) whereas it was much better than these two situations in squatter settlements (*i.e.*, 0.41 km). However, the resettlers have several complaints regarding the adequacy of medical facilities available to them. These complaints are: (i) irregularity and malafide supply of medicines in government dispensaries; (ii) non-availability of specialists in medicine, surgery, orthopaedics, gynaecology and pediatrics to render necessary services to the patients; (iii) improper attention paid to poor patients by doctors; (iv) over crowdedness of patients resulting in long queues and little time for doctors to examine the patients properly; and also (v) non-availability of doctors as well as conveyance facilities for taking the patients to the hospital at the time of emergency.

To overcome the above stated problems, the resettlers suggest an increase in the number of dispensaries and doctors in resettlement colonies. At least one dispensary in each resettlement colony should provide medical services round the clock and a vehicle should be made available for carrying patients to the dispensary in case of emergency. However, none of the respondents gave any suggestion to improve the

health culture among the resettlers so that contagious and dangerous diseases like malaria, cholera, tuberculosis and various skin diseases could be nipped in the bud. They are little aware of preventive aspects of diseases and hygienic and clean surroundings.

Education

Of the 315 respondents, in 267 cases the average number of school-going children per family is 2.47 which has shown increase over the situation prevailed in 1977-78 (1.99 km). The resettlers are, in fact, quite aware of the benefits of education and despite low income and other distressed eventualities in their life, they do not deprive their youngsters of their rights to children. Besides, a majority of households is very enthusiastic in imparting technical education to their children which was the case in 1977-78 also.

Post and Telegraph

As indicated by Misra and Gupta, these four resettlement colonies were in a disadvantageous position from the angle of distance covered by the respondents from their residence to post and telegraph office. Presently the average distance covered by them is 0.25 km which is much lower than the situation prevailed in 1977-78 (1.62 km) and while living in squatter settlements (0.64 km).

Housing

The provision of 25 sq. yd. plot to the resettlers has been a debatable issue since the time they were shifted from squatter settlements to resettlement colonies. Of the 315 respondents, a majority (72%) still holds the view their plots were more than 25 sq. yd. when they were dwelling in squatter settlements. Comparing the present accommodation in these resettlement colonies with the one available in squatter settlements, about 45 per cent consider it to be worse than what was available to them in the latter or after immediately shifting to these colonies in 1977-78.

Recreation

As far as the availability of recreational facilities like parks, community halls, etc., is concerned cent-per-cent of the households in the select colonies are provided with such facilities in their localities, although they give a deserted look due to their poor maintenance. Very few of the community halls in these colonies have radio, television set, etc. Hardly people visit these complexes to refresh their minds after a long day of physical exertion. On the other hand, they depend upon expensive refreshing facilities like visiting cinema or taking alcoholic drinks with friends. Consequently they become economically worse off and fall

into the trap of 'vicious circle of poverty' and destitution as the amount of money earned through their day long struggle is barely sufficient to make both ends meet.

Market

There was no proper market facility in these resettlement colonies in their early years of establishment. For the low income group people who are mostly daily wage earners, location of market in a far off place causes lot of hardships to buy their daily provisions after a long spell of drudgery and strenuous work at the end of the day. However, it seems that presently cent-per-cent of the households in the select resettlement colonies are satisfied with the existing market facilities in their vicinity and the average distance travelled is hardly 0.25 km to avail them of.

CONCLUSION

The findings of the sample households show that despite their long stay in resettlement colonies the resettlers have not achieved any significant improvement in their socio-economic conditions. The average per capita income of the sample households is very low compared to the average per capita income of the total population in Delhi. The availability of basic amenities such as water supply, electricity, education, health, sanitation, etc., is also highly unsatisfactory as compared to other residential localities in Delhi. Although no comparison has been made but the newly established colonies of high, middle and low income groups in the vicinity of resettlement colonies in West Delhi and trans-Yamuna area are seemed to be in advantageous position with regard to the supply of basic civic services. Even a comparison of the availability of socio-economic facilities in resettlement colonies at present with the situation existed before and after coming to these resettlement colonies in 1977-78 does not present a happy picture.

Poverty, in fact, is the greatest of all sources of pollution. Unless there is an improvement in the earning capability of the urban poor, there cannot be any appreciable change in their social and economic conditions. Biological needs always preponderate over the social needs. Thus the resettlement colonies in Delhi have failed to bring out any visible change in the life and living conditions of the squatter dwellers as they are located in the periphery and the policy-makers have not taken adequate steps to enhance their earning capabilities by decentralising the economic activities of the city in its various parts.

As the poor resettlers have failed to improve their economic conditions this has further led to *benami* transaction of the plot. In the sample it was found that around 20 per cent of the original allottees had either

sold away their plots or had given their tenements on rent. For some of them the 25 sq. m. of plot is a gold mine which fetches around Rs. 50,000 in a metropolitan city like Delhi on making a *benami* deal. Few squatter dwellers think that house is a secondary thing for them as they can easily shift to some other unauthorised vacant plots in the city by constructing their own *jhonpris* and at the same time they can have their independent business with that lumpsum amount of Rs. 50,000 to raise their socio-economic conditions, later. Thanks to the efforts put in by the Government to declare the *benami* transactions as illegal which would now prevent illegal trafficking of people in resettlement colonies. However, the problem of improving living conditions still remains in the forefront. As is evident from the foregoing analysis of the situation, the standards of the availability of socio-economic facilities have not improved. The living conditions from that angle are at the most comparable to the situation once prevailed in squatter settlements wherefrom these people came to these resettlement colonies. It means that the resettlers have not been able to overcome the problems of slum like conditions in these colonies.

In fact, the policy of resettlement in Delhi should envisage not only the provision of adequate socio-economic facilities in resettlement colonies but also the creation of job opportunities in their vicinity. By developing the agricultural sector in the hinterland of Delhi metropolitan city, several industrial activities can be generated in these localities. Their location for these activities seems to be ideal as they are at the periphery of the city. Various agro-based and small scale industrial units such as flour mills, oil mills, food processing units, wood and pulp industries and above all cottage industries such as knitting, tailoring, weaving, carpentry, wood carving, etc., can generate adequate employment opportunities for these resettlers. Similarly, attempt can be made to develop animal husbandry, horticulture and dairy activities. However, all these activities can be more successful if, side-by-side, adequate infrastructural facilities such as development of roads, transport, communication facilities can be created within the hinterland as well as for the promotion of household industrial activities—more space is provided in the tenement. Marketing will not be a problem due to the existence of many market places in Delhi and surrounding satellite towns.

The position of women employment as maid servants which became deplorable after their shifting from squatter settlements is now improving due to the establishment of posh and middle income group localities in the vicinity. But in the beginning itself efforts should have been made to locate these resettlers in the adjacent parts of economically and socially better-off sections of society, so that better services and amenities could also be provided to them at a lower cost of infrastructural development.

The right solution to check the growth of squatter settlements and the degradation of urban environment coupled with over-urbanisation of big and metroplitan cities in the Third World countries like India lies in the development of the countryside and its proper linkage with the small and medium towns of the region. This measure of regional development and planning would certainly minimise rural to urban migration. The aim is also not to stop it completely as the economically weaker sections of society employed in the informal sector of the urban economy are very much needed to perform a positive function in the socio-economic structure of the big cities and metropolitan areas. □

The Mayor-in-Council Form of City Government in Calcutta: Its Nature and Working

SIBRANJAN CHATTERJEE

THE MANAGEMENT of local government is today presenting many complex problems all over the world. Increasing population, rapid urbanisation, rising standards of living, etc., have made the problems in the bigger cities complicated. The existing municipal services are proving inadequate to solve these problems. The resources of local authorities are too meagre to meet the growing civic requirements of the people. The structure of municipal government is also not appropriate to cope with the new problems. There is a general feeling that the system is wanting in leadership which is so necessary for speed and efficiency. This is perhaps the reason why in developed as well as in developing countries, attention is now being increasingly given to strengthen the municipal administration. Various experiments in this direction have been made in various countries from time to time.

"Weak Mayor" Pattern and "Strong Mayor" Pattern of Civic Government

In England, the members of the Council of a local body are, as a whole, involved in the process of decision-making. It is the committees of the Council which exercise important powers within their areas. The executive powers of the municipal bodies are, in practice, exercised by these functional committees which have emerged as specialised agencies for detailed deliberations on different sets of problems and have come to occupy an important position in due course. They have, in reality, supplemented the working of the Council. The Mayor, who also presides over the meetings of the Council, is little more than the city's ceremonial head. This may be called the "Weak Mayor" system. The Mayor is weak in the sense that whatever powers he possesses are mostly of a residual character and in administrative affairs his role is that of an adviser. The Council supervises the administration through an elaborate committee system. As the heads of the committees are

also popularly elected, they feel no compulsion to follow the Mayor. Thus, the Mayor has hardly any power to coordinate the activities of the administrative departments of the municipal bodies. He is just a figure-head.

Originally the "Weak Mayor" system was prevalent in the municipal administration of the USA. But since the close of the nineteenth century most of the medium-sized cities of the USA, with population ranging between 25,000 and half a million, switched over to the "City Manager Plan". The Council formulated the policy framework in general; and a professionally qualified city administrator, appointed by the Council, was wholly responsible for the implementation of the policies in the manner akin to the Managing Director of a business concern. Once appointed, he was allowed to function without day-to-day interference. Subsequently, the larger cities like New York, Philadelphia, Boston, etc., leaned towards another pattern which came to be known as the "Strong Mayor" system. Elected directly by the people, the Mayor was invested with wide administrative powers and responsibilities. As the civic head he could provide both political leadership and administrative direction to the bureaucracy. He had even the power to remove the heads of administrative departments without consulting the Council. The problem was, however, that the Mayors, in most cases, did not have the competence or the time to do justice to their onerous responsibilities of supervising the complicated and expanding activities of the numerous departments under their control. So the Mayors started taking the assistance and advice of the professionally skilled chief executives appointed by them. This system may be described as "Mayor-administrator Plan", and comes close to the presidential system of government which is a cardinal feature of the system of government in the USA.¹

Weakness of the Committee System

The committee system was an effective method for enabling the Councillors to have a first-hand experience of municipal administration. At the same time, this system had a tendency to fragment municipal administration and divide it into several functional components. The Calcutta Municipal Act, 1951, provided for the constitution of several Standing Committees. The tenure of the members of these Committee was one year. Each such Committee was headed by a Chairman and a Deputy Chairman. The selection of the members of the Standing Committees on the basis of proportional representation tended to place a premium on minority representation rendering it difficult for the Committees to acquire a homogeneous character. Secondly, the short tenure of the

¹D.N. Banerjee and S. Sen Gupta, *A Treatise on the Calcutta Municipal Corporation Act, 1980*, Calcutta, Law Reports Pvt. Ltd., 1986, pp. 55-56.

Chairman and members also weakened the position of the Committees. Thirdly, the accessibility of the Commissioner was likely to undermine the role of the Standing Committees in affording effective political leadership. This was because of the statutory position of the Commissioner and his right to ask for the inclusion of any item for discussion by the Corporation. In case of difference of opinion between the Commissioner and the Standing Committees, the matter was required to be referred to the Corporation for final decision. Thus, the Commissioner, if he deemed it necessary, could make an appeal to the Corporation over the heads of the Committees. The position of the Committees, in relation to the Chief Executive Officer of the city Corporation, was consequently shattered to a large extent. Lastly, the Mayor was conceived as the real executive head. But, in reality, he was hardly given adequate power to oversee the day-to-day administration of the Corporation. The real executive powers were vested in the Commissioner. Moreover, as an amateur administrator, the Mayor found it extremely difficult to meet the numerous problems of modern urban administration. On the other hand, the office of the Commissioner on the model of the "City Manager" plan increasingly developed the symptoms of an undemocratic institution superimposed upon a popularly elected Council. The upshot of all this was that the city government was turned into a government of checks and conflicts rather than one with a dynamic and coherent leadership. Even in Britain, where the committee system developed fully, it was felt that the committee system had stood in the way of effective administrative coordination.

Search for an Alternative

In India, there has been a continuous search for an alternative to the "Weak Mayor" system. The Rural Urban Relationship Committee appointed by the Government of India made some recommendations about the position of the Mayor and the structure of the committee system within the Municipal Corporations. The Sixth Conference of the Municipal Corporations held in 1967 adopted a resolution urging upon the Government of India to draw up a model draft bill for the guidance of various Municipal Corporations and State Governments.² A seminar on "Cabinet System in Municipal Government" was organised under the auspices of the Centre for Training and Research in Municipal Administration, at the Indian Institute of Public Administration, New Delhi in September 1969. Although no unanimity could be reached on the nature of political executive in municipal government, nevertheless, there was a general consensus on the need for effecting municipal

²D.N. Banerjee, *op. cit.*, p. 13.

reforms and bringing urban local government in tune with the country's democratic ethos. It also came to be recognized more and more that the deliberative wing of the Municipal Corporation should be separated from its executive wing, that all executive powers should be vested in a determinate authority of cabinet type which would be collectively responsible to the deliberative body, that the Mayor should be placed in a position of providing effective leadership and his tenure to be for a reasonable period.³

The introduction of cabinet model in the Municipal Corporations is stated to have certain advantages. The cabinet system establishes a plural executive as distinguished from the singular executive as a "Strong Mayor" or presidential system of government. It has, therefore, more room for accommodating at least the important political leaders and offering them a share in the exercise of power. Secondly, a harmonious integration of the executive and the legislative wings is achieved through this system which thus steers clear of any possible deadlock between the two under a presidential system of government. Thirdly, the cabinet form can ensure concentration of both legislative and executive leadership in the hands of Councillors. Fourthly, there should be identical forms of government at all levels—national, state and local—if the local bodies are to provide the training ground for politicians aspiring to positions at higher levels. The cabinet system has the great merit of being easily understandable, as we have long been familiar with it, ever since dyarchy was introduced under the Government of India Act, 1919. Lastly, it is also argued that both the elements—power and service—lack in the existing forms of municipal government. The power and prestige attached to cabinet form of executive and the scope for service to the people are most likely to have attracted talented people. The local council, which is generally a talking shop without being effective in decision-making, can have purposeful discussion with the qualitative improvement in political leadership. And with the improvement of the quality of political leadership, administration can expect protection against the excesses of local democracy.⁴ The idea of the Mayor-in-Council, as envisaged here, is slightly different from the concept of Mayor-in-Council in the American context. In USA, the deliberative and the policy-making body called the 'Council' in municipal organization is generally small in size and the Mayor is the sole executive bearing the reflection of the presidential form. But the Mayor-in-

³*Cabinet System in Municipal Government: Proceedings of the Seminar, Centre for Training and Research in Municipal Administration, The Indian Institute of Public Administration, New Delhi, 1970, pp. 1-2.*

⁴The Papers of Mohit Bhattacharya, M.A. Muttalib, and Ali Ashraf presented in the seminar on "Cabinet System in Municipal Government", organized by the Indian Institute of Public Administration, *op. cit.*, pp. 15, 29-30 and 42.

Council, conceived in the Indian context, is a variant of the cabinet system, being a small collective body chosen out of the bigger Council, called the Corporation.

As a matter of fact, a model of municipal cabinet system on the "Mayor-in-Council" pattern was proposed for the Delhi Municipal Corporation in a draft parliamentary bill drawn up in 1966 which did not ultimately mature into effect.

Mayor-in-Council Pattern as envisaged by the Calcutta Municipal Corporation Act, 1980: Political Homogeneity of the Mayor-in-Council

West Bengal is the first State in India to consider seriously the adoption of the "Mayor-in-Council" pattern of city government on the "Strong Mayor" model for Calcutta. In the "Statement of Objects and Reasons" of the Calcutta Municipal Corporation Bill, 1979, it was stated: "The Calcutta Municipal Corporation Bill, 1979, seeks to replace the Calcutta Municipal Act, 1951 and introduces a new set-up of administration for the civic body of Calcutta...." "The bill, which had been passed by the West Bengal Legislative Assembly on May 6, 1980, obtained the assent of the President of India on December 28, 1981, to become the Calcutta Municipal Corporation Act, 1980, repealing the Calcutta Municipal Act, 1951.

Under the Calcutta Municipal Corporation Act, 1980, the municipal authorities are the Corporation, the Mayor-in-Council and the Mayor. In the repealed Act of 1951, the corresponding municipal authorities had been the Corporation, the Standing Committees and the Commissioner. The Standing Committees have now ceased to exist. Instead, there is a provision for the constitution of Municipal Consultative Committees to advise the Mayor-in-Council in the discharge of its functions, if so desired by it. The Commissioner has also ceased to be a statutory municipal authority. He is required to exercise his powers and functions subject to the supervision and control of the Mayor.

At the first meeting of the Corporation after a general election, the elected members of the Corporation elect from among themselves one member to the Mayor and one member to be the Chairman. Under the previous Act, there was provision for the annual election of Mayor and Deputy Mayor. Under the existing Act, the Mayor and Chairman are elected for a term of five years, unless they resign earlier or are removed from office in accordance with the special procedure as laid down in Section 7 (I) (c); and the Deputy Mayor, to be nominated, not elected, by the Mayor. The Chairman presides over the meetings of the Corporation, and not the Mayor as it was previously. Following the principle of separation of the deliberative wing from the executive wing, the position of the Chairman has been made to correspond to that of the Speaker in the Legislative Assembly, and the position of the Mayor may

be said to correspond to that of the Chief Minister of the state.

Section 8 of the Calcutta Municipal Corporation Act, 1980, provides for a Mayor-in-Council consisting of the Mayor, the Deputy Mayor and not more than ten other elected members of the Corporation. The Deputy Mayor and the other members of the Mayor-in-Council are to be nominated by the Mayor from among the elected members of the Corporation.

The nominees of the party or a combination of parties which secures a majority of seats in the elections of Councillors and Aldermen of the Corporation are elected as the Mayor and Chairman. In the elections to the Calcutta Municipal Corporation held on June 30, 1985, out of a total seats of 141, the Left Front secured 68 seats,⁵ Indian National Congress 67, Bharatiya Janata Party 2 and Independents 4.⁶ Kamal Kumar Bose and Prasanta Das Gupta, the nominees of the Left Front, were elected as the Mayor and Chairman respectively as the Left Front could manage to muster the support of the majority with the help of two BJP Councillors and one independent Councillor.

The Cabinet government basically functions through the party system. Political homogeneity is a cardinal principle of cabinet system of government. Following this principal of political homogeneity, all the members of the Mayor-in-Council nominated by the Mayor belong to various constituents of the ruling Left Front.

At the state or national level, the leader of the political party that secures a majority of seats in the Legislative Assembly/House of the People following the elections, is invited by the Governor/President to form the ministry. The Chief Minister/Prime Minister is appointed by the Governor/President, and the other ministers are appointed by the latter on the recommendation of the former. Following the installation of the ministry, the session of the legislature is summoned by the Governor/President on the advice of the Chief Minister/Prime Minister, as the case may be. On the first day of the session of the legislature, the election of the Speaker takes place immediately after the Governor's/President's Address. In the case of Calcutta Municipal Corporation, there being no distinction between the titular head and the real head of the executive government, the Mayor, unlike the State Chief Minister, is not appointed by some superior authority, but is elected by the elected members of the Corporation at the first meeting of the Corporation after a general election. Secondly, the members of the Mayor-in-Council are formally appointed by the Mayor. At the state level, as has been noted, the power of appointment of the members of the Council of Ministers is

⁵Partywise position of the constituents of the Left Front was CPI(M)-49, CPI-7, RSP-6, Forward Bloc-5, Forward Bloc (Marxist)-1.

⁶*The Statesman*, Calcutta, July 2, 1985.

Council, conceived in the Indian context, is a variant of the cabinet system, being a small collective body chosen out of the bigger Council, called the Corporation.

As a matter of fact, a model of municipal cabinet system on the "Mayor-in-Council" pattern was proposed for the Delhi Municipal Corporation in a draft parliamentary bill drawn up in 1966 which did not ultimately mature into effect.

Mayor-in-Council Pattern as envisaged by the Calcutta Municipal Corporation Act, 1980: Political Homogeneity of the Mayor in-Council

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constitutionally vested in the Governor, although the real choice lies with the Chief Minister. A member of the Mayor-in-Council may be removed from office by a written order of the Mayor. Though the fate of a minister of a State Government virtually depends upon the confidence of the Chief Minister, nevertheless he can be removed only by the Governor. The Mayor, like the State Chief Minister, allocates portfolios among the members of the Mayor-in-Council. He presides over the meetings of the Mayor-in-Council. Likewise, the meetings of the State Council of Ministers (or Cabinet meetings) are presided over by the Chief Minister. The members of the Mayor-in-Council have hardly any existence without the Mayor. An individual member of the Mayor-in-Council may bow out of office by reason of ceasing to be a member of the Corporation, resignation or removal. The collective entity of the Mayor-in-Council is not, however, affected thereby. But if the Mayor ceases to hold office, the entire Mayor-in-Council goes away. Similarly, with the resignation or removal of the Chief Minister, the Council of Ministers as a whole stands dissolved.

Mayor-in-Council: Dominant Position of the Mayor

The Executive powers of the Corporation are to be exercised by the Mayor-in-Council. It is the operative municipal authority. The Mayor-in-Council is the sole authority to implement or execute the decisions of the "Corporation at the meeting". Under the 1951 Act, the Standing Committees and the Commissioner had the responsibility to carry out the decisions of the Corporation. But the Standing Committees, as has been noted, were politically heterogeneous, were not, in any way, responsible to the Corporation for their activities and were, above all, overshadowed by the dominant stature of the Commissioner.

There are several quasi-judicial authorities within the body corporate of the Calcutta Municipal Corporation⁷ which lies outside the purview of executive jurisdiction of the Mayor-in-Council. Subject to this sole limitation, the Mayor-in-Council is the supreme executive authority.

The Mayor is the key figure of the Mayor-in-Council. Under the previous Act, the statutory powers enjoyed by the Mayor were confined mainly to presiding over meetings of the Corporation, access to all records, obtaining reports from the Commissioner on municipal administration and hearing of appeal on disciplinary matters. The Mayor had nominal control over Standing Committees or Commissioner. The Standing Committees, which comprised the Councillors and Aldermen, were

⁷The authorities are:(i) Municipal Service Commission,(ii) The Election Authority, (iii) the officers appointed for hearing objections against valuation or assessment, (iv) Municipal Assessment Tribunal, and (v) Municipal Building Tribunal.

practically self-sufficient units. In the 1951 Act, it was nowhere specifically stated that the Commissioner would function under the direction and control of the Mayor. The present Act modelled on the "Strong Mayor" pattern vests the Mayor with enormous powers and a reasonable tenure extending to five years. He is the controlling authority and the real source of executive powers of the Corporation. For all practical purposes, the Municipal Commissioner acts as his "executing arm" in all matters. In emergency cases, the Mayor can take decisions on his own in anticipation of the approval of the Mayor-in-Council. Under the 1951 Act, the emergency powers were vested in the Commissioner.

It has been alleged that in certain vital matters, the Mayor took decisions virtually without informing other members of the Mayor-in-Council. The members of the Mayor-in-Council including the Deputy Mayor were stated to be kept in the dark about the controversial decision of the Calcutta Municipal Corporation to construct a commercial complex at Rawdon Square. Dr. K.P. Ghosh, the Chairman of the Municipal Consultative Committee⁸, and a senior Councillor of the Left Front, publicly brought allegation against the Mayor for taking a unilateral decision without consulting the Municipal Consultative Committee and informing the Deputy Mayor who was in-charge of market and park.⁹ The decision of the Corporation to divert Rs. 15 lakh from the Provident Fund Account of the employees for meeting the expenses incurred in connection with the Mayors' Conference held in Calcutta in 1987 could not initially be approved by most of the members of the Mayor-in-Council.¹⁰ In fact, this decision, in consultation with the State Government, was taken by the Mayor who was the host of this Conference. The members of the Mayor-in-Council were informed of this decision at a time when a portion of the accumulated contributions of the employees towards P.F. have already been diverted. Finding no other alternative, the Mayor-in-Council had to approve this decision. Several members of the Mayor-in-Council in their private discussion have expressed their resentment over the way in which the Mayor has kept the Mayor-in-Council dark on a number of vital policy decisions. They were simply informed of the decisions already taken by the Mayor.

The Mayor-in-Council, including the Mayor, at present, consists of

⁸Under Section 12 of the Calcutta Municipal Corporation Act, 1980, the Mayor-in-Council may constitute such number of Municipal Consultative Committees as it may deem fit. Each such Committee shall consist of not more than five elected members of the Corporation and shall advise the Mayor-in-Council in the discharge of its functions. The provision for constitution of Municipal Consultative Committee is a new innovation under the present Act.

⁹*Jugantar*, a Bengali Daily published from Calcutta, July 12, 1987.

¹⁰*Bartaman*, a Bengali Daily published from Calcutta, November 27, 1987.

12 members. All the major constituents of the Left Front have their representatives in the Mayor-in-Council: Communist Party of India (Marxist)—8, Communist Party of India—2, Revolutionary Socialist Party—1, and Forward Bloc—1. The Mayor belongs to the major constituent of the Left Front, i.e. CPI (M), and the Deputy Mayor, to the CPI. The monthly remuneration of the Mayor, Deputy Mayor, and the members of the Mayor-in-Council (other than the Mayor and the Deputy Mayor) respectively is Rs. 1,000, Rs. 850 and Rs. 750. Moreover, the Mayor is entitled to a sumptuary allowance of Rs. 500 per month, and the Deputy Mayor Rs. 300 per month. The other members of the Mayor-in-Council are too given a sumptuary allowance of Rs. 250 per month.¹¹ Kamal Kumar Bose, the Mayor, is an Alderman. Although there is no legal bar on an Alderman becoming the Mayor, nevertheless, in the context of the collective responsibility of the Mayor-in-Council to the Corporation and in accordance with the accepted norm of cabinet government, it will be better if a person from among the directly elected representatives of the people holds the Mayoral Office.

Collective Responsibility of the Mayor-in-Council to the Corporation

Collective responsibility of the executive to the legislature is the crowning feature of the cabinet system. According to Section 8 (5) of the Calcutta Municipal Corporation Act 1980, the Mayor-in-Council shall be collectively responsible to the Corporation. This collective responsibility of the Mayor-in-Council is the basic attribute of the cabinet form of city government which the Act envisages to institute.¹² The accepted methods of enforcing the responsibility of the executive in a parliamentary model of government are: (a) Question, (b) Calling attention notice, (c) Resolution, (d) Adjournment, (e) Discussion on matter of urgent public importance, and (f) No-confidence motion, etc. Under Section 105 of the Act, a Councillor or an Alderman may ask the Mayor-in-Council questions on any matter relating to the administration of the Corporation or the municipal government of Calcutta. The period of notice of a question is seven working days. The question in writing shall have to be submitted to the Municipal Secretary.

According to sub-section (2) of Section 105, no question shall: (i) bring in any name or statement not strictly necessary to make the question intelligible, (ii) contain arguments ironical in expressions, imputations, epithets of defamatory statements, (iii) ask for an expression of opinion or the solution of a hypothetical proposition, (iv) ask as to the

¹¹The Calcutta Municipal Corporation (Remuneration and Facilities Rules', 1985, as published in the *Calcutta Gazette* Extraordinary, dated July 11, 1985.

¹²Mani, Sanyal, *New Dimension in Civic Services*, as published in *The Statesman*, Calcutta, April 19, 1987.

character or conduct of any person except in his official or public capacity, (v) relate to a matter which is not primarily the concern of the Corporation, (vi) make or imply a charge of a personal character, (vii) raise questions of policy too large to be dealt within the limits of an answer to a question, (viii) repeat in substance questions already answered or to which an answer has been refused, (ix) ask for information on trivial matters, (x) ordinarily ask for information on matters of past history, (xi) ask for information set forth in accessible documents or in ordinary works of reference, (xii) raise matters under the control of bodies or persons not primarily responsible to the Corporation, and (xiii) ask for any information on any matter which is under adjudication by a court of law.

Section 105 (2) of the Calcutta Municipal Corporation Act, 1980, is virtually the reproduction of Rule 43 of the Rules of Procedure and Conduct of Business in the West Bengal Legislative Assembly, that relates to the conditions of admissibility of questions in the Legislative Assembly. The Presiding Officer has the right to disallow any question which is, in his opinion, in contravention of the provisions of sub-section (2). If any doubt arises whether any question is in contravention of the provisions of this sub-section, the matter is to be decided by the Presiding Officer, whose decision shall be final. The question may be answered either by the Mayor or by any other member of the Mayor-in-Council. Supplementary questions, if any, thereafter follow. These supplementary questions are put for the purpose of further elucidating any matter of fact regarding which an answer has been given by the Mayor-in-Council orally. As a matter of convention, the person who has put the question is given the first chance to put a supplementary question.

Section 105 is a new provision introduced in the present Act. Under the previous Act, there was no provision for the right of the Councillors to ask questions. Reference may be made to the rules relating to the 'questions' put in the West Bengal Legislative assembly. The period of notice of a question is 12 clear days. The questions may be classified into two categories: starred and unstarred. The questions, which are answered by the minister orally on the floor of the legislature, are called starred in nature. The questions for written answer are called unstarred questions. The questions are required to be written in the prescribed form. A member who desires an oral answer to his question shall distinguish it by an asterisk. If no asterisk is put to a question, it is treated as a question for written answer. The questions marked by asterisk are known as starred questions. The questions which are not distinguished by asterisk are called unstarred questions. In the Calcutta Municipal Corporation, no such distinction between starred and unstarred questions is made. The Mayor-in-Council generally gives a verbal reply to

the questions in the meeting of the Corporation. If, owing to the lack of time or any other reason, it is not possible to answer any question orally, the written reply thereof is furnished in the next meeting of the Corporation. There is no printed 'question' form yet available for the Councillors. They have to write the questions in plain paper. Although there is no restriction on the number of questions as such, which an MLA may ask during a session of the Assembly, yet it is provided that not more than three starred questions by the same member will be placed on the list of questions for oral answer on any day. The questions in excess of three are placed on the list of questions for written answer. Thus, there is no limitation whatsoever on the number of unstarred questions. But a member can not ask more than three starred questions on single day. In the Calcutta Municipal Corporation Act, we find no restriction on the number of questions that a Councillor or an Alderman may ask. It has, however, been agreed to by the ruling Left Front and the Opposition parties represented in the Corporation that no Councillor will ask more than two questions in a meeting of the Corporation. In the case of Legislative Assembly, the Speaker decides the admissibility of a question. He has the unfettered right to disallow any question.¹³ Similarly, as noted earlier, the Presiding Officer of the Corporation decides on the admissibility of a question, and his decision is final. The Mayor, however, reserves the right to refuse to answer a question if, in his opinion, it cannot be answered without prejudice to the public interest. So, even if a question be admitted by the Presiding Officer, the Mayor, or on his instruction, any other member of the Mayor-in-Council, may refuse to reply to that question on the simple plea of safeguarding public interest. No such discretion has been given to the Chief Minister or the State Council of Ministers. It may be noted that the mechanism of editing the questions has not still developed in the Calcutta Municipal Corporation. In the state legislature, the questions given notices of are edited in the Assembly Secretariat before being sent to the administrative departments concerned for answer. For this purpose, there is a separate section, namely, 'question section' in the Legislature Secretariat.

According to Section 106 of the 1980 Act, any Councillor or Alderman may give notice of raising discussion on a matter of urgent public importance to the Municipal Secretary specifying clearly the matter to be raised. The notice supported by the signatures of at least two other elected members shall reach the Municipal Secretary at least forty-eight hours before the date on which the discussion is sought. If the Chairman

¹³Rules 34-56 of the *Rules of Procedure and Conduct of Business in the West Bengal Legislative Assembly* (Secretariat, West Bengal Legislative Assembly, 1983), [Hereinafter to be referred to as *Rules of Procedure*]. *A Hand Book for Members*, Legislative Assembly Secretariat, West Bengal, 1982, pp. 24-29.

admits the notice, he may specify such time for discussion as he may consider appropriate. There will be no formal resolution or voting following discussion. Likewise, under Rule 194 of the Rules of Procedure and Conduct of Business in the West Bengal Legislative Assembly, a member desirous of raising discussion on a matter of urgent public importance may give notice in writing to the Secretary specifying clearly and precisely the matter to be raised. The notice must be accompanied by an explanatory note stating reasons for raising such discussion and supported by the signatures of at least two other members. If the Speaker is satisfied that the matter is urgent and is of sufficient importance to be raised in the House at an early date, he may admit the notice and in consultation with the Leader of the House, fix the date and the time not exceeding two and a half hours, for discussion. There will be no formal motion before the House for voting. The member, who has given notice, will make a short statement and the minister shall reply in short. The other members, with previous permission of the Speaker, may also take part in the discussion.¹⁴ In the Calcutta Municipal Corporation, however, no member other than one who has given notice of raising discussion is generally allowed to speak.

The Councillors or Aldermen may also ask for statement from the Mayor-in-Council on an urgent matter relating to the administration of the Corporation or the municipal government of Calcutta by giving a notice to the Municipal Secretary at least one hour before the commencement of the sitting on any day. The Mayor or a member of the Mayor-in-Council may either make a brief statement on the same day or fix a date for the same. There shall be no debate on such statement at the time it is made. Not more than two such matters shall be raised at the same sitting. The same practice is followed in the West Bengal Legislative Assembly with a minor distinction that not more than one calling attention notice is accepted on a day.¹⁵

The Councillors have also the right to bring resolution for consideration in the meeting of the Corporation. The notice of the resolution will, however, reach the Municipal Secretary at least forty-eight hours before the time fixed for the meeting.¹⁶ The right of the members of the West Bengal Legislative Assembly to move resolution in the House is laid down in Rule 166 of the Rules of Procedure in the West Bengal Legislative Assembly.

Finally, the elected members of the Corporation, like the members of the State Legislative Assembly, have the right to remove the Mayor and the Chairman before the completion of their normal tenure. Section 7(1) (c) of the Calcutta Municipal Corporation Act, 1980, provides

¹⁴A Hand Book for Members, p. 34.

¹⁵Rule 198 of the Rules of Procedure.

¹⁶Section 96 of the Calcutta Municipal Corporation Act, 1980.

that a Mayor or a Chairman may be removed from office by a resolution carried by a majority of the total number of elected members of the Corporation at a special meeting of the Corporation called for this purpose upon a requisition made in writing by not less than one-third of the elected members of the Corporation. It is provided that no such resolution shall be moved before the expiry of six months from the date of assumption of office by a Mayor or a Chairman, as the case may be. It is further provided that if such resolution is not carried by a majority of the total number of elected members of the Corporation, no further resolution for the removal of the Mayor or the Chairman shall be moved before the expiry of a period of six months from the date on which the former resolution was moved. Under the 1951 Act, there was no provision of bringing no-confidence move against the Mayor who used to hold office for a term of one year. Under Rule 199 of the Rules of Procedure and Conduct of Business in the West Bengal Legislative Assembly, a no-confidence motion in the Council of Ministers, in order to be admitted, requires the support of at least forty-eight members of the Legislative Assembly. No restriction relating to time-limit upon the right of the members to bring no-confidence motion, however, exists. On January 21, 1987, a no-confidence motion brought by the Congress (I) Councillors against the Mayor was discussed. But amidst discussion and before voting on the motion could take place, the Chairman abruptly adjourned the meeting on the plea that according to the rules, the meeting could not continue beyond 7 p.m.¹⁷

Under Section 94 (1) of the Calcutta Municipal Corporation Act, 1980, the Corporation shall meet not less than once in every month for the transaction of business. This is analogous to Section 88(1) of the Calcutta Municipal Act, 1951. But for the last two years and a half the meeting of the Corporation was generally held not more than once in a month, and the duration of a meeting was maximum 5 to 6 hours. Only during March 1986 and March 1988, the meeting continued for three consecutive days. In the said meetings the municipal budget for the respective financial years was presented and approved. Till 1972 (prior to the supersession of the Corporation by the State Government on March 22, 1972), the Corporation met usually once in a week, i.e., on every Friday. It is difficult to understand how it is possible for the Councillors and Aldermen to perform properly their duties concerning the enforcement of collective responsibility of the Mayor-in-Council if the Corporation meets few and far between and the duration of a meeting is so short. For the lack of time, the Councillors and Aldermen are not allowed to submit more than two questions in a meeting, although there is no statutory bar on the number of questions which they may ask.

¹⁷ *The Statesman*, Calcutta, January 22, 1987,

From a perusal of the proceedings of the meetings of the Corporation, it appears that the elected representatives have not so far been able to utilize adequately the opportunities which the existing Municipal Act has conferred on them to control the functioning of the executive machinery of the 'city government'. The *average* number of questions, calling attention notices, notices of raising discussion on a matter of urgent public importance and notices of resolution so far placed in the meetings of the Corporation are respectively : 25, 15, 2 and 6. These figures demonstrate that so far as questions and calling attention notices as techniques of enforcing the responsibility of the Mayor-in-Council are concerned, the Councillors have taken some positive interest. But here also, the Councillors, who have taken regular interest, vary from 10 to 15 only, *i.e.*, approximately one-tenth of the total number of elected representatives. The factors responsible for this *prima facie* disappointing state of affairs may be : insufficient number of meetings, lack of healthy atmosphere which makes constructive discussion and criticism virtually impossible, unawareness among the majority of Councillors of their 'new and greater' responsibilities and also inadequate press coverage of the Corporation meetings. In the context of the insufficient press coverage of the proceedings of the meetings of the Municipal Corporation, many Councillors, in their discussion with the author, have expressed doubt about the utility of regular homework for the Corporation meetings, because this 'sincere endeavour', to many of them, will hardly serve any purpose excepting the academic one.¹⁸

The Corporation's legislative role is facilitated by a fullfledged Municipal Secretary's Department which consists of, among others, one Secretary, five Deputy Secretaries and seven Assistant Secretaries.

Instability of the Mayor-in-Council

From the very party composition in the Calcutta Municipal Corporation, it can be inferred that the Corporation is extremely vulnerable to political instability. In the Corporation elections held in June 1985, as already noted, no party or a combination of parties could secure a clear majority. The Left Front managed to get its candidates elected as Mayor and Chairman with the support of the BJP and Independent Councillors. In January 1987, one Independent Councillor, Sultan Hossain, who was with the Left Front, crossed over to Congress (I).

¹⁸It has become a tendency, and rather increasingly, on the part of many public representatives to get press coverage by any means whatsoever. The motive behind the creation of ugly and chaotic scene on the floor of the House by some legislators seems to be to get press highlight. There is a feeling that a serious deliberation or a speech on many occasions misses the attention of the press. But a disorderly incident instantly and inevitably finds place in the news headlines, and the actors of the drama automatically come to limelight,

Two BJP Councillors publicly declared their decision to support the no-confidence motion against the Mayor and other members of the Mayor-in-Council tabled by the Congress (I). On January 21, 1987, as has already been stated, before voting on the no-confidence motion could take place, the Chairman adjourned the meeting on the ground that according to the rules, the meeting could not continue beyond 7 p.m.¹⁹ It had been alleged, and probably not without foundation, that the main reason for the Chairman's reluctance to put the motion to vote was that the Left Front did not have the majority in the Corporation during the day. Kamal Kumar Bose resigned from the Mayorship on January 24, 1987. In his resignation letter, he admitted that "it appears that the Left Front has lost the majority in the House".²⁰ Till the election of the new Mayor, Bose continued as caretaker Mayor. There was, however, no Mayor-in-Council during that period. Confusion prevailed for about a month. The BJP, which virtually held the balance, suggested the formation of an all-party Mayor-in-Council to be headed by a BJP Mayor. Its argument was that the people of Calcutta in the last civic election had given a mandate for equal sharing of power in the civic body. Accordingly the ten posts of the Mayor-in-Council could have been equally distributed between the Congress (I) and the Left Front. There could have been adjustments regarding the portfolios of the Chairman and the deputy Mayor.²¹ On February 13, 1987, the BJP severely criticized the Left Front Government for the 'deplorable' condition of the city. It further announced that its support might go to the side which would accept its 17-point charter of demand. These demands, among others, included the rebuilding of a Shiva Shrine in the Rajabazar area of North Calcutta which was demolished a few years ago, improvement of water supply and drainage in the Burrabazar area which is presented by both the BJP Councillors, etc.²² On February 20, 1987, Kamal Kumar Bose, the Left Front candidate, was, however, reelected as the Mayor by defeating his Congress (I) rival Shiv Kumar Khanna, by an unexpected margin of 22 votes.²³ The election result was a clear indication of the fact that in defiance of the party whip, several Congress (I) Councillors and Aldermen voted for the Left Front candidate, and one did not attend the meeting at all. Two BJP Councillors, who had been wooed in turn by both the Congress (I) and the Left Front, abstained from voting on the plea that neither of them agreed to accept their 17-point charter of demand. The cross-voting was stated to have been influenced by rumours of denial of party tickets in the ensuing

¹⁹*The Statesman*, Calcutta, January 22, 1987.

²⁰*Ibid.*, January 25, 1987.

²¹*Ibid.*, January 28, 1987.

²²*Ibid.*, February 14, 1987.

²³*Ibid.*, February 21, 1987.

Assembly elections to some of the Pradesh Congress (I) group leaders and their followers.²⁴ Thus, the decision of the BJP Councillors not to vote for either candidate did not matter in the least because the Congress (I) was upstaged by its own members. In fact, intra-party strife of the Congress (I) is helping the Left Front to remain in power in the Calcutta Corporation. Besides, some Congress (I) Councillors are said to have developed some sort of 'understanding' with the Mayor. Unless the Left front is in a position to be in power, the Corporation might be superseded, and in the elections to follow, many of the Congress (I) Councillors, it is feared, might not get party nomination.²⁵

The question may, therefore, reasonably arise whether it is possible for the present Mayor-in-Council to provide any dynamic executive leadership and to implement, with force and confidence, any policy with such a narrow majority. Reference, in this connection, may be made to an apprehension of B.S. Murthy, the former Union Health Minister, that he expressed, while inaugurating a seminar on 'Cabinet System in Municipal Government', organized by the Centre for Training and Research in Municipal Administration, at the Indian Institute of Public Administration, New Delhi. Murthy had observed: "Stability in administration is the keystone of its success. If as a result of introduction of cabinet system in local government stability becomes casualty, we should think twice before doing so. It may be that no single party would command overwhelming majority in local government elections where elections are fought more on personal and other considerations than on party programmes, and with our experience of coalition governments in some States we should avoid creating a situation where municipal governments may become a game of the political chessboard of local intrigues".²⁶ This apprehension cannot be wholly ruled out in the case of Calcutta Municipal Corporation in the context of the existing party configuration prevailing there.

Borough Committee

A brief reference may be made to the Borough Committees contemplated under the present Act. Because of the vast physical size of the city²⁷ there is need for a decentralized second-tier unit to look after purely local problems which may not be efficiently administered by the headquarters administration. This explains the *raison d'être* of the Borough Committees. In the repealed Act of 1951 also, there was pro-

²⁴The *Statsman*, Calcutta, February 21, 1987.

²⁵The author developed this impression after talking to a number of Congress(I) Councillors.

²⁶*Cabinet System in Municipal Government: Proceedings of the Seminar*, pp. 7-8.

²⁷According to 1981 Census, the population of Calcutta is 32,91,655; its area is 104 sq. km.

vision for the constitution of Borough Committees. But these Committees had no defined powers and responsibilities, and because of the vagueness of their jurisdiction, had little impact on the administrative system of the city government. The present Act, on the other hand, has specifically laid down the functions of Borough Committees. These functions include the removal of accumulated water on streets or public places due to rain or otherwise, the supply of pipes, sewerage and drainage connections to premises, collection and removal of solid wastes, disinfection, provision of health immunization and bustee services, maintenance of parks, drains and gulleys, etc. A Borough Committee, within the local limits of the borough, is required to discharge these functions, subject, however, to the general supervision and control of the Mayor-in-Council. The officers and employees of the Corporation, who are assigned to a particular borough for the discharge of such functions as appropriately fall within the domain of the Borough Committees, are subordinate to the respective Borough Committee. This subordination is not, however, absolute as a Borough Committee itself functions under the general supervision and control of the Mayor-in-Council. The present system, in fact, combines the deliberative role of a Councillor or a member of the Corporation with limited executive responsibility as a member of the Borough Committee.²⁸

One hundred forty-one electoral wards of Calcutta Municipal Corporation have been grouped into 15 Borough Committees. So, on an average, a borough would be having nine or ten wards. The membership of the Borough Committee is not open to the Aldermen as they do not represent any specific ward. Under the original Act, the Chairman of Corporation, the members constituting the panel of Presiding Officers and the members of the Mayor-in-Council were debarred from being the members of the Borough Committees. The Chief Executive Officer, CMDA, or the Chairman of the Calcutta Improvement Trust were also left outside the composition of the Borough Committees since they were not elected from any ward constituting the borough. Subsequently in 1985, the relevant Section of the Act [Section 11 (2)] was amended to waive the restriction on the Chairman of the Corporation, Councillors constituting the panel of Presiding Officers, and the members of the Mayor-in-Council, to be represented on the Borough Committees. This legislative amendment was initially brought about by an Ordinance immediately following the elections to the Calcutta Municipal Corporation in June 1985. The Left Front, as already stated, succeeded in forming the Mayor-in-Council with the help of a very narrow majority. Had the Chairman, 12 members of the Mayor-in-Council and the members constituting the panel of Presiding Officers been debarred from becoming the members

²⁸D.N. Banerjee, *op. cit.*, p. 73.

of the Borough Committees, most of such Committees would have been virtually controlled by the Opposition Party, *i.e.*, Indian National Congress. Consequently, the possibility of continuous strained relation, if not always open confrontation, between the Mayor-in-Council and the Borough Committees dominated by the Congress (I), could not be overruled. It has, therefore, been held, and not totally without foundation, that the motive behind the promulgation of the aforesaid Ordinance, just on the eve of the session of the West Bengal Legislative Assembly, was purely political. Even the opinion of the elected 'city government' was not taken prior to the amendment of the Act; and this has been construed, in certain quarters, as derogatory to the principle of local self government. The members of the Mayor-in-Council and even the Chairman of the Calcutta Municipal Corporation are, at present the ordinary members of the relevant Borough Committees which are headed by the ordinary Councillors. This is rather unusual. The Mayor-in-Council is the highest executive body and the Borough Committees have to function under the complete control of the Mayor-in-Council. How can a member of a controlling and superior body (*i.e.*, Mayor-in-Council) play the role of an ordinary member of a subordinate body (*i.e.*, Borough Committee) within the same organization? This is administratively anomalous.

The Calcutta Municipal Corporation is the first municipal body in India which is making experiment with the cabinet system. It is a break-through in the governing system of the large cities in India. To the extent this model will strike roots and prove to be a successful one, its gradual spread to other large cities in India is a matter of time. Already, the All-India Council of Mayors has voiced its unanimous demand for the introduction of the Calcutta Model throughout India.



Municipal Personnel System in Maharashtra

H.M. GOLANDAZ

THE MUNICIPALITIES in the erstwhile Bombay state were first set up under Government Act of 1850 and granting of Municipal status depended on voluntary application by the citizens. The Act of 1862, increased the functions of municipal bodies and the Act of 1873 made them corporate bodies. The subsequent Acts, and the Bombay District Municipal Act, 1901 defined the structure, powers and functions of municipal bodies in the state. The Act of 1901 made the provision for appointment of a Chief Officer for the municipalities. The Act of 1925 conferred wider powers on the city or borough municipalities by providing for creation of four executive committees besides the Standing Committee. After the bifurcation of Bombay State into Maharashtra and Gujarat in 1960, the municipalities in these states have been governed by the Maharashtra Municipalities Act, 1965 and Gujarat Municipalities Act, 1963 respectively.

Types of Municipal Bodies in Maharashtra

There are three types of Municipal bodies in Maharashtra, namely, municipal corporations, municipal council and cantonment boards. As of today, there are 11 municipal corporations, 221 Municipal Councils and seven Cantonment Boards in Maharashtra. These are governed respectively by the Bombay Provincial Municipal Corporation Act, 1949 (BPMC Act), Bombay Municipal Corporation Act, 1888, City of Nagpur Corporation Act, 1948, and Maharashtra Municipalities Act, 1965 (MM Act) and Cantonment Act, 1924. The MM Act, 1965 has been amended in March 1987, but has not been brought into force.

Structure, Composition, Tenure of Municipal Councils

Like Gujarat, in Maharashtra too the municipal authorities are charged with carrying out the provisions of the MM Act for each municipal area:¹

¹Government of Maharashtra, *The Maharashtra Municipalities Act, 1965*. Chapter II, Section 7, Government Central Press, Bombay, p. 7420.

- (a) the Council;
- (b) the President;
- (c) the Standing Committee;
- (d) the Subjects Committees, if any; and
- (e) the Chief Officer.

The Municipal Council consists of elected Councillors, whose number varies from 20 to 60 according to population and class of the municipal council.

A President is elected from amongst the Councillors and he holds office for a term coterminus with the term of the elected councillors. The Vice-President is appointed by the President for a period of one year. The Act also provides for the reservation of seats for women and for the persons belonging to the Scheduled Castes and Scheduled Tribes.

For every 'A' and 'B' Class Councils, there is a Standing Committee and the following five subjects Committees.²

- (i) Public Works Committee;
- (ii) Education Committee;
- (iii) Sanitation, Medical and Public Health Committee;
- (iv) Water Supply and Drainage Committee; and
- (v) Planning and Development Committee.

It is compulsory for the 'C' Class Municipal Councils to appoint a Standing Committee. However, they may appoint Subject Committees by their choice.

If any Council has acquired or established a Transport Undertaking, it may, with the previous approval of the State Government, appoint an additional Subject Committee by the name of Transport Committee. The members of the Committees are elected by the Councillors and hold office for a period of one year. Number of Councillors in these Committees can be decided by the municipal council depending upon their Class and the total number of Councillors.

Appointment of Chief Officer and Other Officers

According to the Act there is a provision of Chief Officer for every council. Like GM Act, the MM Act does not specify the educational qualifications of the Chief Officer but those are provided under the Rules. There is also a provision of other appointments by the Municipal Council. The creation of these posts require the sanction of the Director of Municipal Administration. These posts are:

- (i) a Municipal Engineer;

²Government of Maharashtra, *op. cit.*, Section 62, p. 7448A.

- (ii) a Water Works Engineer;
- (iii) a Municipal Health Officer;
- (iv) a Municipal Auditor;
- (v) a Municipal Education Officer; and
- (vi) any other officer as may be designated by the State Government in this behalf.

As per the Maharashtra Municipalities Act of 1965, there was a provision for a common cadre of the Chief Officers and all or any of the officers specified in sub-section (2) as mentioned above, whose minimum salary (exclusive of allowances) was not less than Rs. 225 per month. If the minimum salary (exclusive of allowances) is Rs. 75 per month, the power of making appointment is vested in the Standing Committee and if the council so decides, in the President. If the minimum salary of the post is above Rs. 75, a general or special order of the Director of Municipal Administration is necessary. In this case, the power of making appointment vests in the Council or in the Standing Committee.³

Maharashtra Public Services (Subordinate) Selection Board Act, 1973

Accordingly, the municipal councils appointed their personnel up to 1976. With the coming into force of the Maharashtra Public Services (Subordinate) Selection Board Act, 1973 with effect from 15th November 1976, appointments to Municipal Services were brought under the purview of this Board. In addition to this, the staffing of the State Government Offices and Zilla Parishads was also one of the basic functions of the Board. This Act was amended in 1977, so as to exempt lower level municipal posts from the purview of the Board. The amended Act came into force from January 1, 1978. Under the amended Act, the Government issued orders specifying certain categories of posts in municipal councils, as lower level (inferior) posts.

Direct Recruitment of Municipal Employees

The appointment by transfer and deputation were totally out of the purview of this Board. Only the appointment by direct recruitment and promotion were within the purview of this Board. For the purpose of appointment by direct recruitment, the Municipal Councils were required to notify the vacancies to the Board in the prescribed form under Rule 14(1) of the Maharashtra Public Services (Subordinate) Selection Board Rules, 1976. This form had details pertaining to the number of vacancies, qualifications, age, experience and other relevant details. In addition, the form indicated, reservation for Backward Classes. For the purpose of indicating the reservations, the municipal councils were

³Government of Maharashtra, *op. cit.*, Section 75, 75A, 76, pp. 7453-54A.

required to consider the Maharashtra Municipalities Backward Class Persons (Recruitment in Municipal Services) Rules, 1977, as notified by the government.⁴

Mode of Recruitment

As regards the mode of recruitment, according to Section 76 of the Maharashtra Municipalities Act, 1965, the posts which fall under purview of the State Selection Board, the Director of Municipal Administration was required to issue special or general orders. However, in practice, for the creation of posts on the establishment schedule of the municipal councils, the Collectors and Commissioners did not specify whether the posts should be filled in by direct recruitment or by promotion.

The powers of appointment of candidates selected by the Board vested in the Chief Officer of the Municipal Council, it was for the Chief Officer to determine the mode of recruitment. Guidance, however, could be drawn from two factors, *i.e.*, prescribed experience and the age limit (where more than five years' experience and no age limit prescribed, it was assumed that the post was to be filled in by promotion; where less experience was prescribed and the age limit was 25 to 30 years, the posts could be considered for being filled in by direct recruitment).

Under section 76 of the MM Act, pay-scales and allowances are determined by bye-laws made by the council if the minimum salary (exclusive of allowances) is less than Rs. 75 per month and in case of other employees whose salary is Rs. 75 or more, they are determined by general or special orders made by the Director of Municipal Administration.⁵

Changes in the Method of Direct Recruitment

The requisitions for the post indicate the age, qualifications, and experience which were required to be advertised by the Board. There were, however, instances where the qualifications prescribed by the Collector or Commissioner were not actually incorporated by the municipal coun-

⁴Government of Maharashtra, Urban Development and Public Health Department, No. MUG-4676/35931/CR/602/U.D.—9, dated August 25, 1977.

⁵Section 76 of the MM Act has been amended by the *Maharashtra Act No. IV of 1987*. Accordingly, if the minimum salary (exclusive of allowances) does not exceed Rs. 200 per month, the power of making appointment is vested in the Standing Committee and if the Council decides, in the President. If the minimum salary of the post exceeds Rs. 200 the power of making appointment is vested in the Council and if the Council so decides in the Standing Committee. Subject to general or specific orders by the State Government, the Chief Officer is also empowered to make appointments to the posts the minimum salary of which does not exceed Rs. 200.

Some changes are also introduced in Section 79(2). However, till now these amendments made under the Maharashtra Act, No. IV of 1987 are not brought into force,

cils in the requisitions. After the modification of Maharashtra Municipalities Act of 1965 on February 28, 1983, the method of appointments was changed.

All appointments to the posts other than the posts of inferior Municipal Servants were to be made by the Chief Officer or by any person duly authorised by the council for the purpose, from the list of candidates selected under the Maharashtra Public Services (subordinate) Selection Board Act, 1973.

All appointments to the posts of inferior municipal servants created were to be made by the Chief Officer, or by any person or authority authorised by the council for this purpose. By the order of the Governor on August 6, 1983, Maharashtra Public Services (Subordinate) Selection Board Act, 1973 was repealed and all Selection Boards and Special Selection Board constituted thereunder were dissolved and members were removed from their office.

This Act is called The Maharashtra Public Services (subordinate) Selection Boards (Repeal) Act, 1986.⁶

Existing Municipal Personnel System in Maharashtra

There are two types of personnel systems in the Municipal Councils of Maharashtra State. First is state cadre of Chief Officers appointed by direct recruitment (Unified Personnel System) and the second is separate personnel system in which the recruitment is controlled by the municipal council and "Staff Selection Committee" appointed by the council.

Cadre of Municipal Chief Officers

Since May 1, 1974, there is a cadre of Chief Officers in Maharashtra. Chief Officers Service is called the "Maharashtra State Municipal Officers' Service" and consists of Grade I, Grade II and Grade III Chief Officers. This is a state cadre and the officer appointed in those three cadres may be posted to A, B or C class Municipal Council in any part of the state.

Ratio of Promotion and Direct Recruitment

Appointment to the post of Chief Officer Grade I of the service is made by promotion and direct recruitment in the ratio of 75:25. On the basis of result of combined competitive examination to be held by the commission in accordance with the rules prescribed under Government Resolution, Revenue and Forest Departments.⁷

⁶Government of Maharashtra, *Maharashtra Government Gazette* dated August 8, 1983, Maharashtra Act No. XXXLV of 1983, p. 295, 297.

⁷Government of Maharashtra, Revenue and Forest Department, Government Resolution No. RCT/1181/85439/M-10 dated October 13, 1981.

Twenty-five per cent of the Grade I posts are filled by Direct Recruitment method. (It is necessary for the candidate to possess a bachelor's degree). Remaining 75 per cent of the posts of the Chief Officers are filled by promotion of suitable persons on the basis of seniority-cum-merit from amongst the persons holding the post of Chief Officer, Grade II, having not less than three years' service in that post.

Appointment to the post of Chief Officers, Grade II of the service is made by promotion and direct recruitment in the ratio of 50:50.⁸

The candidates are selected on the basis of the result of combined competitive examination held by the commission. A candidate has to present a degree certificate. Suitable candidates are selected by promotion on the basis of seniority-cum-merit, from the persons holding a post of Chief Officer, (Grade III). Three years' service experience in the same capacity is necessary for promotion.

Appointment to the post of Chief Officers, (Grade III) of the service is made by direct recruitment. A candidate must possess a degree certificate or the Local Self-Government Diploma of All India Institute of Local Self-Government, Bombay or a Diploma in Local Self-Government Administration of the Nagpur University or a Diploma in Civil Engineering or Public Administration or management. The candidate should also possess a sufficient knowledge of Marathi. The upper age limit in the case of municipal employees possessing the prescribed qualifications for being appointed to the post of Chief Officers, Grade III, is 40 years. It is also provided in the Government Rules that where any post in the service remains vacant due to non-availability of suitable candidates for recruitment to such post either by direct recruitment or promotion, or where there is any leave or other temporary vacancy of any post in the service, the post is filled in by appointment of a suitable officer from the Revenue Department of the Government.

Following are the qualifications of the Chief Officers of some of the Municipal bodies in Maharashtra.

<i>Designation</i>	<i>Municipal Council</i>	<i>Educational Qualification</i>
Chief Officer	Malkapur	Undergraduates, L.S.G.D.
Chief Officer	Igatpuri	S.S.C., L.S.G.D.
Chief Officer	Ramtek	S.S.C., L.S.G.D.
Chief Officer	Pachora	S.S.C.
Chief Officer	Chiplun	B.Com. L.G.S.
Chief Officer	Latur	B.Sc.
Chief Officer	Buldana	M.Com.
Chief Officer	Yawatmal	M.A.
Chief Officer	Morshi	M.A., L.S.G.D.

⁸Government of Maharashtra, Urban Development Department, Government Notification No. MCO/1084/1860/CR 256/84-UD-14, dated May 18, 1985.

According to the Government of Maharashtra Rules, the candidates who are appointed to the posts of Chief Officers' Grade I & II by direct recruitment, are on probation for two years. In this period, they have to undergo the courses of training^a and qualify such examinations, within two chances. Until they satisfy the appointing authority, their appointment is provisional. Their appointment is confirmed on the basis of their performance and service record.

Appointing Authority for Promotion

For the appointment of Chief Officers there is a constitution of Selection Committee which prepares a select list. Two separate select lists of Chief Officers in Grade II and Grade III are prepared for the purpose of appointment to the post of Grade I and Grade II Chief Officers respectively by promotion. Following are the members of this selection committee:

- | | |
|--|-----------------|
| (i) The Secretary, Urban Development Department and Director of Municipal Administration | <i>Chairman</i> |
| (ii) The Deputy Secretary, Urban Development Department (Municipal Administration) | <i>Member</i> |
| (iii) An Officer not below the rank of Under Secretary belonging to Backward Classes | <i>Member</i> |
| (iv) The Deputy Director of Municipal Administration; Bombay | <i>Member</i> |

Procedure for Promotion

The selection committee usually meets in the month of September every year or in any month as the Chairman may specify in this behalf.

The names of the officers included in each select lists are arranged in order of their *inter se* seniority at the time of such inclusion.

The Selection Committee may also give any particular officer higher rank than that warranted by his seniority if he is considered by the committee to be of exceptional ability or outstanding merit in accordance with the orders on the subject issued by the Government from time to

^aGovernment of Maharashtra, Urban Development Department Order No. MCO/2785/2234/CR-219/85/UD-14 dated 3rd March 1987. According to this Government Order the directly recruited five grade I and forty grade II Probationary Chief Officers selected by the MPSC, will have to undergo Induction Training at the All India Institute of Local Self-Government, (AII LSG) Bombay. This training programme is divided into two phases. (6 months preliminary training at the All India Institute of Local Self-Government—Phase I; 4½ months practical training in municipalities and 1½ month training at the All India Institute of Local Self-Government, Phase II). They will have to qualify the examination after the completion of training. As per the requirements of the State Government, this arrangement may continue in future.

time. The seniority *inter se* of officers promoted to the posts of Grade I and Grade II Chief Officers is determined as follows:

1. If they are promoted on different dates, then according to the dates of promotion.
2. If they are promoted on the same dates then on the basis of their *inter se* seniority in the grade from which they are promoted.

The Chief Officers' service is transferable anywhere in the state, except that the chief officer belonging to the Grade III can not be transferred from one Revenue Division to another without the previous sanction of the State Government.¹⁰

Along with the intelligence test, General Knowledge test and *viva voce* or personality test, the prescribed subjects in the competitive examination are so selected that an aptitude and study of the candidate in the related subjects is done with objective criteria.

The foregoing paragraphs narrated the various changes introduced in the municipal personnel system in Maharashtra. However, various issues like, establishment of some independent agency to govern the municipal personnel matters, introduction of the unified cadre of the other officers (municipal engineers, water works engineers, town development officers, municipal health officer, municipal auditor, municipal accountant and municipal education officer); and the practice of appointing Revenue Officer or the post of Chief Officer need reconsideration. □

¹⁰Government of Maharashtra, Urban Development Department Resolution No. MCO. 1082/2021/CR-198/82/UD-14, dated December 17, 1983, known as The Maharashtra State Municipal Chief Officer's Service (Recruitment and Conditions of Service) Rules, 1983, p. 199.

The Calcutta State Transport Corporation (CSTC): An Evaluation of Its Performance

DILIP HALDAR
and
GURUDAS GUPTA

THE IDEA to set up a state owned passenger transport service was originally mooted by the pre-Independence Provincial Government of Bengal in 1943-44. Prompted by the deterioration in performance and conditions of service offered by the prevalent private buses, it was contended that the state should take over the responsibility of supplying mass transportation services in the metropolitan area.

The service was formally introduced on July 31, 1948 under the West Bengal State Transport Organization (WBSTO), a departmental unit of the Directorate of Transportation. Initially the fleet consisted of twenty-five petrol driven single decker buses operated on six routes. The diesel era began with the purchase of two double decker buses from England in 1949-50.

Other important factors weighing in favour of the Government of West Bengal's involvement in the field of public transport were:

- (i) The increasing commuter volume in the city and its conurbation spurred by large scale immigration from East Bengal and other parts of the state and its hinterland, in search of employment from opportunities arising from industrial and commercial expansion in West Bengal;
- (ii) Private buses were mainly family enterprises with vehicle ownership rarely exceeding two; so they were considered to be financially incapable and organizationally inequipped to handle future transit demand or provide jobs to the growing number of unemployed in the State;¹

¹Report of the Commission of Inquiry, Calcutta Bus and Tram Fare Structures in Terms of Decimal Coinage, 1948, pp. 6-7.

- (iii) Private bus services had become operationally unreliable and an environment of indiscipline amongst the operators led to frequent confrontations with passengers.

The major objectives for starting state bus services may, therefore, be summed up as follows:

- (a) to bring motor bus services in West Bengal under a central ownership;
- (b) to provide commuters with more organized, reliable, safe and cheap transport services and facilities using vehicles and other necessary infrastructure of the latest yet appropriate type; and
- (c) to provide jobs to the growing number of middle-class unemployed and displaced persons from erstwhile East Bengal.²

On June 15, 1960, the WBSTO was reconstituted into the Calcutta State Transport Corporation (CSTC) under the Road Transport Corporation Act (Union Act LXIV) of 1950. This Act, which formally came into effect in the state from March 2, 1953, reflects the recognition at the national level of the need to provide commuters with public transport services.

As a Corporation, the CSTC was vested with autonomous powers to operate the services including route selection, vehicle purchase and maintenance, depot management, etc., in addition to dealing with other day-to-day administrative functions. The Board and the Managing Director are appointed by the State Home (Transport) Department which also reviews and approves the annual budget. At present, the Transport Minister of West Bengal is the Chairman of the Board.

The CSTC obtains share capital from the State and Central Government, supplemented by loans from the state, the Centre and the CMDA for financing capital expenditure. A portion of the fixed capital outlay has been financed through the re-discounting facilities offered by the Industrial development Bank of India (IDBI) By floating market loans capital has also been obtained. As regards working capital, the CSTC is authorized to borrow from nationalized banks against hypothecation of inventories, in addition to ways and means advances sanctioned by the State from time to time. Besides these sources, between 1977-78 and 1984-85, financial and technological assistance was provided in phases under the World Bank aided Calcutta Urban Transport Project (CUTP).³

While the CSTC was authorized to operate public transport services

²*Report of CSTC Inquiry Commission*, Government of West Bengal 1976, pp. 14-15.

³*Staff Appraisal Report IDA-CUTP*, 1980, pp. 28-32.

in the metropolitan area for maximum social benefits, it was also deemed essential to run the vehicles on a financially viable basis in order to avoid operational losses that would add to social costs.⁴ In effect, the Corporation is required to produce maximum service outputs through the best possible allocation and productive utilization of all existing and potential resources, simultaneously, to minimize costs and explore possibilities of generating maximum yields in order to be organizationally self-sufficient.

The present fleet with a serviceable strength of 955 buses on a total of 52 city routes makes 7.86 lakh passenger trips daily, that is approximately 12 per cent of the estimated demand in the metropolitan area.

FORMS OF SERVICE AND PHYSICAL CHARACTERISTICS

Besides the ordinary form of city service being plied by the CSTC, three other service forms had been introduced between 1968-75. These were the:

- (i) *Long Distance Service (LDS)*, which was started on April 14, 1968 to serve areas beyond the CMD to neighbouring districts and towns, as well as some adjacent states. By June 1973 there were 10 routes on which 20 buses plied regularly. In 1981 there were 41 routes which rose to 55 in 1983-84. The service-km had increased simultaneously. In 1977-78, 59 lakh km of service was provided, compared to 122 lakh km in 1983-84.
- (ii) *Limited Stop City Service (L)* was started on July 1, 1972. These buses stopped at every second or third stop and charged an additional Rs. 0.05 per stage travelled. In 1977-78 there were 10 routes which by 1983-84 had increased to 19.
- (iii) *Special City Service (SP)* was started on July 1, 1975 by the name of 'Deluxe' services, offering point to point access within the city. It was later re-christened as 'special' services. The initial fare rate was Rs. 0.10 per km for a minimum of five kms, which rose to Rs. 0.14 per km in 1984. From six routes in 1975, special buses now run on 17 routes with destinations ranging beyond city limits.

The CSTC fleet consists of single-decker (SD) and double-decker (DD) buses, with articulated double-deckers (SADD) having greater passenger capacities also being used on some routes.

It may be mentioned here that since the LDS does not directly serve intra-urban commuters, the present study will be restricted to the analysis

⁴Vide Section 22, *The Road Transport Corporation Act, 1950* (64 of 1950),

of functions and performance of the city service forms.

Table 1 shows some essential physical characteristics of the CSTC fleet by bus and service type.

TRENDS IN SERVICE PERFORMANCE

The years of the Corporation witnessed some progress in terms of service outputs as well as revenue earned. After 1961-62 a declining trend characterized the operations, continuing over the years. The CSTC's problems arise mainly from its mismanagement of resources—physical, financial and human. Although the fleet and personnel strength had been upgraded from time to time with the addition of new service forms, the performance of the service continued to remain below the desired level.

From Table 2 it may be noted that the decline in outshedding of buses and the subsequent loss of trips set in from the later half of the Sixties and has continued to the Eighties. During the Seventies this trend became more prominent. In 1974-75 the ratio of effective to serviceable vehicles, which is an indicator of capacity utilization, was the lowest at 33.5 per cent. The early years of the Eighties however witnessed a rise in the serviceable strength with the influx of new vehicles purchased under the CUTP. But both outshedded and effective fleet rose marginally, only to fall back in line with the previous trend.

The service output estimates of the corresponding years followed a similar pattern of decline. Service-km between 1960-61 and 1977-78 declined from 1,30,448 to 70,612 (46%). There was marginal rise to 94,392 km in 1979-80 after which it fell once again to 86,956 km. in 1983-84 (50% fall over 1960-61). The average daily per bus km. went down from 40 per cent between 1960-61 and 1977-78 to a further 5 per cent in 1983-84. Similar fluctuations are observed in passenger volume carried, with the decline being particularly prominent between 1966-67 to 1971-72, between 1973-74 to 1977-78 and finally between 1980-81 to 1983-84. Other service outputs which indicate the worth of the service to the commuter, show similar decline. The marginal gains registered in some intermittent periods could not be sustained nor consolidated for the future. This loss of effectiveness of the fleet through underutilization of capacity, cost the CSTC heavily in financial terms, as revenue dropped correspondingly. The deterioration in the performance of state buses may be mainly attributed to the following factors:

1. The ambiguous nature of certain government policies towards public transport, particularly bus services in Calcutta and its conurbation, proved detrimental the CSTC's operations;
2. The rising incidence of breakdowns from mechanical failure led

TABLE 1 SOME IMPORTANT PHYSICAL CHARACTERISTICS OF CSTC BUSES

Bus Type	Vehicle Cost	Service Form	Fuel Consumption in (kms/lit)	Anticipated Vehicle Life		Seating (AV)	Passenger Capacity per Bus		
				In Years	In Run (lakh)		Standing Allowed (AV)	Standing Actual (AV)	Total Allowed (AV)
				(5)	(6)		(8)	(9)	(10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SD CUTP	Chassis 1.70 Body 0.80 2.50	OD/L/SP	OD & L SP	2.4 3.0	8	3.5	For OD and L 32 30 For Special	60	62
	(1977-78 Prices)								92
SD CUTP	Chassis 1.40 Body 1.10 2.50	—do—	OD & L SP	2.0 2.85	—do—	51	20	55	71
									106
DD CUTP	Chassis 3.0 Body 1.50 4.50	OD/L	2.0	8	3.0	72	70	90	142
	(1977-78 Prices)								162
DD CUTP	Chassis 6.50 Body 2.00 8.50	—do—	1.78	—do—	—do—	—do—	—do—	—do—	—do—
	(1881-82 Prices)								
SADD	Chassis 3.25 Body 2.25 5.50	OD/L	1.78	8	3.0	98	70	125	168
									223

Note: (i) OD = Ordinary City Service
SP = Special City Service
L = Limited Stop City Service

(ii) Fuel consumption of some STUs in other metropolitan cities.
BEST (Bombay) = 2.9 km/lit (AV)
DTC (Delhi) = 3.6 km/lit
PTC (Madras) = 3.5 km/lit

TABLE 2 UTILIZATION AND EFFECTIVENESS OF CSTC SERVICES (CITY)

Period	Serviceable Fleet	Outchadded Fleet	Effective Fleet	Average Daily Veh. Km of Service Provided	Average Km. Per Bus Per Day	Passenger Trips/Day (in lakhs)	Average No. of Passengers/Day Per Bus	Average No. of Passengers/Vehicle Km/Day
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1960-61	729	567	536	1,30,448	230	12.85	2,266	9.8
1961-62	811	615	584	1,39,359	226	13.85	2,133	9.9
1962-63	855	866	614	1,28,316	192	13.53	2,102	10.5
1963-64	802	643	566	1,24,560	193	13.41	2,101	10.7
1964-65	766	645	560	1,30,390	202	10.83	2,079	8.3
1965-66	941	689	599	1,31,232	190	10.83	1,582	8.2
1966-67	913	689	578	1,15,616	167	10.85	1,583	9.3
1967-68	873	655	525	1,04,657	159	10.83	1,641	10.3
1968-69	806	597	436	87,123	147	10.78	1,824	12.3
1969-70	774	561	395	78,304	139	9.62	1,693	12.2
1970-71	764	493	332	65,753	133	7.94	1,610	12.0
1971-72	810	471	308	61,095	129	7.41	1,573	12.1
1972-73	887	591	439	84,109	142	9.52	1,635	11.3
1973-74	920	533	370	73,150	137	8.43	1,582	11.5
1974-75	988	489	331	66,849	136	7.75	1,505	11.5
1975-76	886	506	353	71,506	141	7.48	1,390	10.4
1976-77	983	553	424	84,109	152	8.10	1,338	9.6

(Continued)

(Continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1977-78	938	508	404	70,612	139	7.10	1,397	10.0
1978-79	864	492	468	—	142	9.40	—	—
1979-80	858	621	460	94,392	152	9.60	1,545	10.1
1980-81	935	630	460	90,828	145	9.20	1,455	10.1
1981-82	935	589	476	86,016	143	8.60	1,440	9.9
1982-83	1006	645	499	84,933	135	8.50	1,402	10.0
1983-84	955	667	463	86,956	125	7.86	1,135	9.0

- to lower outshedding, and trips remaining incomplete;
3. Non-replacement of aged vehicles with new ones in due time led to higher breakdowns and subsequent low outshedding;
 4. High rate of absenteeism among the operating crew and other labour problems that lowered human productivity; and
 5. The operations were not financially viable, so that revenue deficits continued to accumulate over the year thereby plunging the CSTC deeper into public debt.

Besides these causes, there are the losses in service outputs due to the increasing frequency of congestion on routes. Over the years this phenomenon has considerably affected normal movement of vehicles, causing increases in travel time and costs, both of which add to the organization's problems.

Further insight into the problems has been provided below through detailed investigation of these factors.

Public Transport and Related Government Policies

To expand the scope of State bus operations within the city and its immediate neighbourhood, the State had issued directives between 1954-63 authorizing the takeover of all routes and banning the entry of private buses in all these areas.⁵

Between 1964-66 the CSTC had virtual monopoly of all intracity routes, though it had been enjoying the advantages of operating on nationalized routes since 1960-61. The improvement was however short-lived. Problems relating to fleet maintenance and labour indiscipline set the momentum for renewed deterioration, which offset all gains derived earlier.

On December 9, 1966, in acknowledgement of the CSTC's inability to serve the public transport needs of Calcutta. The State revoked its earlier stand on nationalization of routes and allowed private buses once again on city routes.⁶

Gradually, the private buses were re-instated on city and suburban routes and they began gaining in strength. This process continued till 1970-71 by which time the CSTC's performance had gone down still

⁵*Vide* Home (Transport) Department, Government of West Bengal, Notification Nos. in the Calcutta Gazette Extra-ordinary.

(i) 6067—WT, September 26, 1957.

(ii) 3335—WT, May 20, 1960.

(iii) 5952—WT, August 21, 1963.

(iv) 1928—WT, December 8, 1973.

⁶*Vide* Home (Transport) Department, Government of West Bengal, Notification No. 14151—WT in the Calcutta Gazette Extraordinary, December 9, 1966.

(Continued)

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further, being plagued with numerous problems, financial and organizational.

Paradoxically, the trend of poor performance by the State bus become the Government's basis for favouring the growths of private buses in an apparent attempt to bridge the public transport demand deficit on the CMD. Thus 22 new private bus routes were sanctioned in 1966-67, 12 for plying the northern and 10 for the southern zones of the metropolitan area.⁷ In 1982-83 with activities under the CUTP for the improvement of CSTC in progress, and 343 new buses added to its fleet. The Government sanctioned 805 private bus permits on 230 routes out of which 26 belonged exclusively to the city.⁸ By July 1984, a total of 2,814 private bus permits had been sanctioned along with 1,004 mini-bus permits. Out of which 1,800 private buses and 800 mini buses were in actual operation.⁹

Studies on comparative performances of modes by the State Home (Transport) Department¹⁰ however indicate that between 1981-82 and 1983-84, while service-km for CSTC had remained more or less constant, (vide Table 2) in case of the private and Minibus it had gone up by 80 per cent and 84 per cent respectively. Yet in terms of average daily km travelled per bus category, the CSTC's rate of fall was slower than that of the private bus. In fact this estimate had fallen from 179 km/bus/day in 1974-75 to 150 km/bus/day in 1982-83, and further to 118 km/bus/day in 1983-84 for the private bus, while corresponding estimates for the CSTC show 136 km/bus/day in 1974-75, 135 km/bus/day in 1982-83 and 125 km/bus/day in 1983-84. In case of the Minibus the rate of decline had been higher from 250 km/bus/day in 1982-83 to 170 km/bus/day in 1983-84.

This does not imply however that the State bus was performing better, but shows that due to unplanned and ad hoc implementation of some of the Government's policies, public transport systems in general, and the State bus in particular, have been severely affected. As an outcome, unhealthy competition among different modes has over the years reduced serviceability to the captive commuters. At the same time, rise in vehicular traffic has increased the levels of congestion and pollution within the city, while road space has diminished by nearly 30 per cent of the existing level.

Breakdowns and Their Causes

Breakdowns have been caused mainly due to poor maintenance and

⁷Vide Home (Transport) Department, Government of West Bengal, *op. cit.*

⁸Public Vehicles Department Office Records, 1983.

⁹Public Vehicles Department Statistics July 31, 1984.

¹⁰Home (Transport) Department, Government of West Bengal, Route Rationalization Studies Nos. 5 and 6, June 1982 and February, 1983.

untimely repair of buses, and to some extent due to the deplorable road conditions in Calcutta. Added to these is the excessive loading of buses at semi peak and peak hours, which not only damages the vehicles but causes quicker wear and tear of tyres and other parts. This increases the need for maintenance beyond the normal check up, raises costs on repair and shortens the life of the vehicle. On an average trip, a state bus is 50 per cent over loaded which often reaches 80 per cent-100 per cent during peak hours (vide Table 1).

Table 3 shows the breakdown rate over the year. An idea of the magnitude of breakdowns suffered by the CSTC may be formed after comparisons with those of other State Transport Undertakings (STU), as also shown in the same Table. Table 3 indicates that casualties from mechanical and other failures for the CSTC have been on the rise since the early Sixties. The high rate of increase continued till 1971-72 after which the rate fell, although absolute estimates were considerably high. The falling trend once again became high in 1978-79 and continued to remain so thereafter, though at a lower rate. Comparisons with BEST,

TABLE 3 BREAKDOWNS PER 10,000 KMS OF CSTC
BUS SERVICES (CITY)

Period	Breakdowns	Per cent Rise over 1960-61				
1960-61	5.4	—				
1961-62	3.5	(—) 35				
1962-63	5.3	(—) 2				
1963-64	8.8	63				
1964-65	11.0	104				
1965-66	9.4	74				
1966-67	12.4	130				
1967-68	17.3	220				
1968-69	23.4	333				
1969-70	26.5	391				
1970-71	27.8	415				
1971-72	31.7	487				
1972-73	21.4	297				
1973-74	25.9	380				
1974-75	28.5	428				
1975-76	23.9	343				
1976-77	15.4	185				
1977-78	20.4	278				
1978-79	34.4	537				
1979-80	28.4	426				
1980-81	31.5	483				
1981-82	22.3	312				
1982-83	27.8	415				
			Breakdowns			
			Best	DTC	PTC (Madras)	Pune M.T.
			2.5	6.9	1.6	2.4
			2.4	4.7	1.7	2.4
			0.8	4.4	1.6	2.3

DTC, PTC Madras, and Pune MT further reveal the CSTC's state of affairs in very poor light.

The high rate of breakdowns in the CSTC is mainly due to: (a) spares; (b) maintenance, and (c) technical hands.

Spares: (i) non-availability of essential spares; (ii) where available, these cannot be properly utilized since no adequate system of inventory control exists within the organization; and (iii) continued cannibalization of parts from old and decrepit vehicles increases the possibilities of breakdown, since such parts are either damaged or mismatched.

Table 4 shows the expenditure pattern on spares as parts of operational expenses over the years.

From Table 4 it is evident that while the proportion of money spent on spares has come down over the years by nearly by 50 per cent, cost

TABLE 4 EXPENDITURE ON SPARES AND STORES INCURRED BY CSTC

<i>Period</i>	<i>Expenditure on Spares & Stores (in Rs. lakh)</i>	<i>Total Expenditure (in Rs. lakh)</i>	<i>Proportion of Expenditure incurred on Spares & Stores (Per cent)</i>	<i>Cost of Spares & Stores per km. of Service Pro- vided (Rs.)</i>
1960-61	37	344	11	0.09
1961-62	49	471	10	0.10
1962-63	52	532	10	0.10
1963-64	57	577	10	0.12
1964-65	63	621	10	0.14
1965-66	62	713	9	0.13
1966-67	67	745	9	0.15
1967-68	69	820	8	0.17
1968-69	73	883	8	0.22
1969-70	91	938	10	0.31
1970-71	87	922	9	0.35
1971-72	100	1,080	9	0.44
1972-73	119	1,250	9	0.38
1973-74	106	1,363	8	0.37
1974-75	95	1,557	6	0.35
1975-76	157	1,796	9	0.54
1976-77	232	2,180	11	0.65
1977-78	104	1,428	7	0.32
1978-79	132	1,673	8	0.36
1979-80	120	1,982	6	0.27
1980-81	156	2,293	7	0.36
1981-82	168	2,618	6	0.39
1982-83	168	2,932	6	0.38
1983-84	190	3,089	6	0.45
1984-85	172	3,057	6	0.44

of spares per km of service operated has increased at a higher rates (approx. five times).

While the breakdown rate continues to be high it appears that less money is made available for the purchase of spares. The decline in the proportion of total expenditure given to spares is therefore a disturbing trend when considered in this light. These symptoms are more conspicuous during the Eighties. On one hand new buses have been added to the fleet from CUTP funds, but outshedding and effective utilization continue to remain poor. On the other hand, rate of breakdowns is quite high and remains so because funds are not available for the purchase of spares required to rectify the mechanical and other faults. This procedure is self-defeating in nature and urgently calls for corrective measures that can be manifested on one hand, by availability of more funds for spares purchased and a proper system of inventory control, on the other hand, by following appropriate process of preventive maintenance of the fleet.

Maintenance: (i) lack of effective system of preventive and corrective maintenance; and (ii) overcrowding of depots beyond their designed capacities obstructs normal maintenance work and other servicing jobs, which get delayed in the process. Often buses in good condition get damaged in depots due to jostling and crowding.

Table 5 shows how the respective depots have been made to accommodate vehicles beyond their designed capacities. The excess occupancy at the Depots, as shown in Table 5, indicate that there is no systematic disposal of decrepit vehicles but that they are allowed to occupy valuable Depot space for scrap. It also shows that breakdowns and other repair work are not handled by the maintenance staff in time, resulting in the vehicles not being outshedded on schedule.¹¹ This implies that the workshops and other repair units are not productively utilized but kept occupied with pending work. All this not only adds to the general congestion at the depots and workshops but adds to the time cost as well.

Technical Hands: (i) lack of properly trained personnel for handling technical jobs; and (ii) pressure on the mechanical staff at the depots being exerted to somehow bring out the following days outshedding quota. In this process, little or no attention can be paid to the buses needing repair. This results in unproductive utilization of spares and labour, at the same time running the risk of damaging the buses and/or making them accident-prone.

Apart from these drawbacks, no standard norms in respect of vehicle servicing are followed at the Depots. Normally, minor inspections and servicing of vehicles ought to be done every three weeks or after

¹¹Report of S.S. Yechury, *Committee on CSTC*, 1972.

TABLE 5 ACCOMMODATION OF BUSES IN CSTC DEPOTS (SELECTED YEARS)

Depot	Year of Inception	Designed capacity (original)	Modified capacity	Actual Accommodation				Surplus/less capacity
				1972-73	1976-77	1982-83	1983-84	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Belghoria	1950	131	150	227	201	182	183	(+) 33
2. Lake	1951	154	200	224	269	169	188	(-) 12
3. Howrah	1956	124	200	259	201	202	227	(+) 27
4. Paikpara	1960	121	150	191	254	190	205	(+) 55
5. Taratola	1966	150	164	148	206	174	190	(+) 26
6. Maniktola	1972	101	125	58	133	168	149	(+) 24
7. Garia	1976	38	(38)	—	—	74	83	(+) 45
8. Thakurpukur	1978	114	114	—	—	135	150	(+) 36
9. Salt Lake	1983	128	(128)	—	—	—	55	(-) 73
10. Kasba	—	130	—	—	—	—	—	—
		1,191	1,269	1,107	1,264	1,294	1,430	(+) 161

NOTE : (i) Figures in parenthesis indicate no change in original capacity.

(ii) Surplus/less capacity indicates accommodation of 1983-84 over modified capacity.

(iii) Kasba Depot is yet to be commissioned.

SOURCE : Office records of the CSTC.

5,000 km. Major inspections are needed after six weeks or after 10,000 km. overhauling after every one and half—two year or after 1,50,000—2,00,000 km. These norms had been established keeping in view the road and traffic conditions of Calcutta.¹² During the early years of the CSTC, these norms were followed at the Belghoria Depot. However, over the years this practice has been given up and depots are more often entrusted with the type of maintenance and repair work suited to the Central Workshop, thereby become unproductive and used as junk-yards too.

Vehicle Replacement Policy

The greater the age of a vehicle, the lesser becomes its efficiency and higher the costs to maintain it. Superannuated and nonusable buses need to be replaced with new ones in keeping with the outshedding targets set.

Bus retirement and replacement policies need to follow definite norms which take into account the life of the vehicle under actual road and traffic conditions, the serviceable fleet strength at any given period, the frequency of wear and tear of parts, and other institutionalized factors. A 10 per cent annual vehicle acquisition norm is ideal for sustaining a desired level of 1,000 serviceable buses with an average rated life of 10 years. Moreover to maintain this level, at least 60 per cent of the vehicles in the fleet ought to be 'young' or below the age of half their economic life.¹³

Table 6 reveals the trend in vehicle replacement followed over the years. A break-up of the fleet in terms of young buses helps to show whether the norms have been adhered to and what the outcome has been. Such an estimate of serviceable young buses has also been included in this table.

From Table 6 it is observed that the trend in bus acquisition is not matched by the trend in which vehicles need to be replaced. Besides, if the active life of the respective bus types were to be rated as per actual road performance, more buses would require to be replaced than shown. Acquisition of vehicles had never followed a uniform pattern, being based not on physical factors but subject to the availability of funds. In fact, what made the CSTC overuse the aged buses was the constant paucity of funds needed to procure the required new fleet over the years.

The ambiguous nature of the State Government's decision on capital grants to the CSTC was also responsible, to a large extent, for the delay in the procurement of new buses. During the Corporation's inception in 1960-61, the depreciation reserve funds of its predecessor, the

¹²Report of the Commission of the Inquiry, Bus, Tram and Taxi fare. Structures, 1973, pp. 67-88.

¹³ASRTU Study Group Report, 1971.

TABLE 6 VEHICLE REPLACEMENT PATTERN AND NUMBER OF YOUNG BUSES IN CSTC
(CITY AND LDS)

Period	Buses due for replacement		Buses Acquired		Yearly Addition/ Reduction	No. of Young Buses in Fleet	Percentage of Young Buses in Serviceable Fleet		
	SD	DD	SD	DD					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960-61	—	—	—	54	32	86	86	512	70
1961-62	—	—	—	80	8	88	88	558	68
1962-63	—	—	—	3	48	51	51	510	60
1963-64	—	—	—	—	19	19	19	443	55
1964-65	—	—	—	28	1	29	29	372	49
1965-66	8	—	8	167	16	183	(+) 175	456	49
1966-67	61	—	61	7	24	31	(-) 30	401	44
1967-68	30	11	41	1	1	2	(-) 39	315	36
1968-69	78	20	98	16	16	32	(-) 66	267	33
1969-70	36	50	86	44	10	54	(-) 32	135	17
1970-71	95	5	100	73	17	90	(-) 10	218	29
1971-72	21	78	99	85	60	145	(+) 93	347	42
1972-73	83	32	115	138	54	192	(+) 77	499	56
1973-74	247	8	255	12	98	110	(-) 145	563	76
1974-75	10	48	58	27	46	73	(+) 15	547	72
1975-76	—	19	19	96	52	148	(+) 129	600	68
1976-77	16	—	16	68	45	113	(+) 97	558	57

1977-78	44	16	60	15	—	15	(—)	45	506	54
1978-79	73	24	97	140	17	157	(+)	60	404	47
1979-80	86	1	87	124	24	148	(+)	61	567	66
1980-81	138	157	295	92	22	114	(—)	181	434	46
1981-82	12	98	110	114	18	132	(+)	22	551	59
1982-83	27	46	73	174	169	343	(+)	270	737	73
1983-84	96	52	148	20	131	151	(+)	3	740	77

NOTE: (i) Life of Buses is assumed to be 8 years.

(ii) DD includes SADD.

(iii) Between 1982 and 1984, 175 DDs broke down reportedly from design deficiencies.

WBSTO, stood at Rs. 94.56 lakh. This was retained as a deposit with the State and the practice continued, so that the amount rose to Rs. 226 lakh in 1962-63. The balance continued to be at the disposal of the State without even crediting the interest thereon. It is not clearly understood why the depreciation funds were kept out of reach of the CSTC, particularly, when for lack of funds, new buses could not be procured in spite of urgent requirement. In its official declaration to the B. Banerji Commission, the CSTC had stated that non-availability of funds at such a crucial stage had crippled it in infancy.¹⁴ Paradoxically, the State had at that time acknowledged that lack of adequate fleet strength had been responsible for the CSTC's poor performance and loss of revenue.¹⁵

It may be observed from Table 7 that funds for the purchase of buses were not uniformly available over the years, which explains the halting pattern of bus acquisition followed by the CSTC. Again, while in some years the proportion of bus expenditure in total capital expenditure was very high (98%), sometimes it was as low as 16 per cent, indicating that the priority of expenditure lay elsewhere.

Moreover, from the bus acquisition pattern (Table 6), it may be observed that more SDs than DDs have been bought. Out of the lot of SDs, a substantial number goes to supplement the Long Distance Service fleet which normally has a higher rate of wear and tear, thereby requiring frequent replenishment. The city fleet is thereby unable to acquire the required number of new buses that would make it possible for CSTC to maintain its desired level of services. All this goes to show that there has been no definite policy for replacement of aged buses.

While it was clearly the State's prerogative to provide the organization with adequate funds to enable it to maintain a rational vehicle replacement policy, it is the organization's task to see that buses are properly maintained and perform their scheduled duties. It is not to the credit of the CSTC that in spite of 60 per cent of young buses in its fleet for the last 10 years, it is unable to bring out more than 65 per cent of the serviceable fleet, out of which 30 per cent cannot fulfil their assigned quota of trips.

Three immediate tasks are envisaged for the CSTC to enable it to deliver an outshedd fleet that approximates the serviceable strength:

1. to have a definite and workable policy for bus replacement;
2. to have an appropriate system of inventory control of spares and other essential parts; and

¹⁴*Report of the Commission of Inquiry, Bus, Tram and Taxi Fare Structure, 1973, p. 5, para 18.8.*

¹⁵*Ibid.*, para 18.9.

3. to gear up its maintenance system and train the technical hands in line with the required job specifications.

Simultaneously, for the State it is essential:

1. to see that funds are sufficiently available to enable the CSTC to purchase its bus replacement policy; and
2. to see that adequate funds are available for purchase of essential spares on a routine basis and not simply to ward off some impending crisis.

Table 7 shows the money spent on buses over the years as part of the CSTC's capital expenditure.

TABLE 7 CAPITAL EXPENDITURE ON PURCHASE OF FLEET

<i>Period</i>	<i>Expenditure on Buses (in Rs. lakh)</i>	<i>Total Capital Expenditure (in Rs. lakh)</i>	<i>Percentage of Expenditure on Buses to Total Expenditure</i>
1960-61	80.23	91.21	90
1961-62	53.41	62.00	87
1962-63	18.00	31.00	58
1963-64	6.00	16.32	36
1964-65	76.37	90.00	85
1965-66	101.00	125.34	81
1966-67	16.00	26.41	59
1967-68	1.40	9.00	16
1968-69	53.00	56.39	93
1969-70	69.00	72.12	95
1970-71	109.04	111.46	98
1971-72	270.04	277.00	98
1972-73	301.47	341.08	88
1973-74	335.14	373.29	90
1974-75	197.16	218.00	91
1975-76	247.46	275.16	90
1976-77	227.00	262.00	86
1977-78	23.22	58.00	40
1978-79	303.00	356.37	85
1979-80	320.35	390.00	82
1980-81	249.37	355.00	70
1981-82	470.39	606.04	78
1982-83	1,964.35	2,112.00	93
1983-84	751.29	945.44	79

The Human Factor

The performance of an organization is largely dependent on the pro-

ductivity of its personnel. It is not sufficient just to have a large labour force but to see that they are gainfully employed. Although the CSTC is a labour-intensive organization, proper training to keep up with modern trends in technology must be imparted as and when required, as an intrinsic part of overall labour policy. Training improves skill which in turn improves productivity. Besides training, productivity is enhanced through motivation of personnel by offering rewards and incentives and by the creation of a healthy work environment. The existence of an idle labour force is an indication that the organisation is unable to utilize its personnel productively. This results in efficient performance on the whole as well as financial loss through redundant overheads.

Between 1960-61 and 1983-84, the labour force has increased by 78 per cent (vide Table 8). The trend is however punctuated by fluctuations over the intervening years. Thus between 1960-61 and 1965-66, there is a rise of 35 per cent, followed by a rather slow rate of growth in the next 10 years. By 1969-70, the staff had however increased by 50 per cent. This is followed by slump till 1977-78 after which the growth rate picks up.

This can be explained by the Government's decision to stop recruitment for some intervening years and to go slow in case of others, in an attempt to cut down on idle overheads. In the process of programme implementation under the CUTP, additional recruitment of labour took place in those years besides replenishment of vacancies created from routine retirements, expiries, etc. All positions were filled up in course of time.

It may be observed that the growth between 1980-84 is not as rapid as that between 1975-80. In the last few years the staff position has remained more or less unchanged, once again due to a Government halt on fresh recruitments.

A glance at the staff cost per km of service provided shows the increasing trend, particularly between 1980-84. On matching these figures with fleet utilization for the corresponding periods, a high level of idle labour is indicated which is a cause of grave concern for the CSTC. With low outshedding and non-completion of scheduled trips, a portion of the operating crew remain idle, partially active, or engaged in other form of work which they are not meant for.

The CSTC loses financially due to this idle labour force through:

- (a) regular payments of salaries for work not done;
- (b) increase in overtime payments to operating and maintenance crew for work partially done either wilfully or due to external circumstances;

- (c) escalation in staff cost per km operated without concomitant revenue yields, which widens the cost-revenue deficit.

Table 8 reveals another factor which throws more light on the low productivity of the CSTC's work force. It is observed that while the overall staff position gains in strengths over the years, the ratio of the Traffic Staff, or those directly responsible for generating revenue, to the total staff, maintains a more or less steady pitch in the Sixties and Seventies but slumps down in the Eighties. This implies that by cutting down on staff who are directly linked with revenue earnings, the corporation stands to loose more since other categories of staff are dependent on the output of the traffic personnel for their personal productivity. It may also be implied through this observation that the CSTC, through its erratic recruitment policies is indirectly abetting labour unproductivity. The CSTC employs a large working force that has grown over the years as shown in Table 8.

TABLE 8 STAFF POSITION IN CSTC (1960-61 to 1983-84)

<i>Period</i>	<i>Staff</i>	<i>% Growth over 60-61</i>	<i>Staff Cost per km. of Service Provided</i>	<i>% of Traffic Staff to Total Staff (Pentennial)</i>
(1)	(2)	(3)	(4)	(5)
1960-61	8,167	—	0.28	59
1961-62	8,775		0.37	
1962-63	9,676		0.38	
1963-64	10,401		0.43	
1964-65	10,261		0.48	
1965-66	11,025	35	0.51	61
1966-67	11,044		0.61	
1967-68	11,799		0.83	
1968-69	12,153		1.13	
1969-70	12,252		1.38	
1970-71	12,083	48	1.67	65
1971-72	12,004		1.80	
1972-73	12,179		1.59	
1973-74	12,233		1.89	
1974-75	12,168		2.07	
1975-76	120,90	48	2.05	64
1976-77	11,805		1.89	
1977-78	12,875		2.41	
1978-79	13,482		2.57	
1979-80	13,819		2.58	
1980-81	14,013	72	2.99	50
1981-82	14,135		3.42	
1982-83	14,129		3.97	
1983-84	14,565	78	4.29	53

Table 9 shows the trend in overtime payments made to the staff over 1980-84 when service outputs were on a declining trend.

The inconsistency in some of the labour policies of the CSTC may be revealed through Table 9:

- (a) growth in staff strength through recruitment and simultaneous increase in overtime payment for work which could not be finished on time; and
- (b) while there is still a fall in the ratio of traffic staff to total staff over the period, the overtime payment to the existing traffic staff rises, which implies that that on one hand the CSTC is cutting down on its Traffic crew in its total labour force; on the other hand it is paying overtime to the existing crew for delayed work.

TABLE 9 CSTC STAFF OVERTIME BILLS (1980-81 to 1983-84)

<i>Period</i>	<i>Staff Position</i>	<i>Ratio of Traffic to Total Staff (%)</i> (<i>Pentennial</i>)	<i>Total Wage Bill</i> (<i>in Rs. lakh</i>)	<i>O.T. Bill for all Staff</i> (<i>in Rs. lakh</i>)	<i>Ratio of O.T. Bill to Total Wage Bill (%)</i>	<i>O.T. Bill for Traffic Staff</i> (<i>in Rs. lakh</i>)	<i>Ratio of O.T. Bill for Traffic Staff and all Staff (%)</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1980-81	14,103	50	1,267.4	63	4.9	51.3	81.7
1981-82	14,135		1,448.0	68	4.7	55.0	81.3
1982-83	14,219		1,736.0	81	4.7	61.2	76.7
1983-84	14,565	53	1,791.4	86	4.8	69.2	80.6

It may also be noted that the overtime bill for the Traffic staff constitutes the greater bulk of the total overtime amount paid to its employees by the CSTC. This trend is also on the rise.

Another indication of the loss in labour productivity is the rise in bus-staff ratio. Table 10 reveals the trend in the bus-staff ratio for the CSTC alongside the staff-cost per km of service operated.

Although no uniform trend in rise of bus-staff ratio is observed in Table 10, the overall picture is that of an excess of manpower attached to a vehicle with no productive work being done by the additional staff. Between 1961-62 and 1971-72, the bus-staff ratio of the CSTC had increased by nearly 80 per cent while effective fleet utilization had come down by nearly 50 per cent (vide Table 2). This trend had improved marginally over the years only to come down again in the Eighties, indicating once again the huge labour potential lying unutilized, and the

TABLE 10 COMPARATIVE BUS-STAFF RATIOS OF STUS OF 5 MAJOR CITIES (SELECTED YEARS)

Period	CSTC Calcutta			DTC Delhi			BEST Bombay			AMTS Ahmedabad			PTC Madras		
	B-S Ratio	Staff Cost/Km		B-S Ratio	Staff Cost/Km		B-S Ratio	Staff Cost/Km		B-S Ratio	Staff Cost/Km		B-S Ratio	Staff Cost/Km	
1961-62	14.3	0.4		—	—		—	—		—	—		—	—	
1971-72	25.3	1.8		11.7	—		15.5	—		8.6	—		—	—	
1976-77	21.3	2.2		11.3	—		14.3	—		8.9	—		9.8	—	
1981-82	20.2	3.4		9.5	1.4		13.3	1.9		8.6	1.8		9.6	1.6	
8982-83	23.4	3.9		9.3	1.6		13.2	2.3		8.9	1.8		9.1	1.6	
1983-84	23.1	4.3		—	—		—	—		—	—		—	—	

Note: (i) STU=State Transport Undertaking.

(ii) B-S Ratio=Bus-Staff Ratio.

consequent financial loss suffered on account of rising overheads but less output. Comparisons with other STUs show that improvements can be brought about if suitable corrective measures are taken.

One of the prime reasons responsible for this poor show by the labour is the high rate of absenteeism. In 1970-71, out of the 764 buses made available from depots, nearly 200 buses could not be outshedded on account of absenteeism amongst the operating staff, mainly drivers and conductors. A depot-wise estimate taken from 6 depots of the CSTC in 1973 shows that an average of 184 vehicles had been idle to absenteeism.¹⁰ In terms of financial loss, at the rate of an average earning of Rs. 330 per bus (Rs. 395 for DD and Rs. 265 for SD), the CSTC had lost an estimated gross amount of Rs. 221.62 lakh by way of revenue. Between 1980-81 and 1983-84, the absenteeism rate amongst drivers and conductors is 25-30 per cent. The Corporation thereby loses on two accounts:

1. by way of revenue due to lesser outshedding; and
2. through increases in overtime payments which have become a regular feature for the operating staff.

Several incentives and reward schemes had been formulated and activated for the CSTC personnel, with the objective of motivating them to raise levels of productivity in respective job spheres. However, from the physical and financial performance of the fleet, it is apparent that these measures have failed to produce the desired effect. A more rational basis for such schemes ought to be selected to enable the personnel concerned to give out their best possible efforts in their respective work spheres.

Financial Performance

Except for a brief period of financial gains from operations between 1960-62, the CSTC has consistently suffered from revenue deficits.

Table 11 shows the accumulation of deficits from operations over the years along with some other information on the CSTC's financial position.

As evident from Table 11, a major problem faced by the CSTC is the rising revenue deficit. Barring 1960-62, revenue generation has not exceeded 50-60 per cent of the operating expenditure in any period. Yet, in the wider interests of society, particularly that of the captive city commuters, the State has had to arrange for continuous revenue support to maintain the services.

Table 12 reveals the amount granted to the CSTC as revenue support or subsidies from 1978-79 to 1983-84.

¹⁰D.K. Haldar, *Urban Transport Problem*, Academic Publishers, Calcutta, 1977, pp. 277-279.

TABLE 11 FINANCIAL PERFORMANCE OF THE CSTC (1961-62 to 1984-85)

Period	Receipts (Rs. lakh)			Expenditure (Rs. lakh)			Surplus Deficit (Rs. lakh)			
	Capital Grants		Revenue income	Capital	Revenue					
	GOWB	CUTP			Total	Excluding Interest & Depreciation		Total		
			(1)	(2)					(3)	(4)
1961-62		63	—	63	486	62	384	471	(+)	15
1962-63		21	—	21	515	31	439	532	(—)	17
1963-64		20	—	20	514	16	488	577	(—)	63
1964-65		99	—	99	549	90	539	621	(—)	72
1965-66		58	—	58	596	125	580	713	(—)	117
1966-67		101	—	101	598	26	624	745	(—)	147
1967-68		21	—	91	608	8	696	820	(—)	212
1968-69		138	—	138	614	56	750	883	(—)	269
1969-70		218	—	218	571	72	790	938	(—)	367
1970-71		350	—	350	517	111	752	922	(—)	405
1971-72		547	—	547	508	277	870	1,080	(—)	572
1972-73		547	—	547	641	341	968	1,250	(—)	609
1973-74		390	—	390	625	373	1,026	1,363	(—)	738
1974-75		968	—	968	611	218	1,153	1,557	(—)	939
1975-76		824	—	824	798	275	1,291	1,796	(—)	998

(Continued)

(Continued)

(Continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1976-77	719	—	719	1,066	263	1,566	2,180	(—) 1,114
1977-78	—	—	—	793	68	1,428	2,101	(—) 1,308
1978-79	325	—	325	950	356	1,673	2,392	(—) 1,432
1979-80	455	—	455	1,218	390	1,982	2,817	(—) 1,599
1980-81	479	79	558	1,409	355	2,293	2,956	(—) 1,547
1981-82	98	794	892	1,509	606	2,618	3,192	(—) 1,683
1982-83	27	1,601	1,628	1,571	2,112	2,932	3,645	(—) 2,074
1983-84	61	1,275	1,336	1,715	945	3,089	4,058	(—) 2,343
1984-85	560	573	1,133	1,505	681	3,057	4,023	(—) 2,518

NOTE: GOWB : Government of West Bengal.

TABLE 12 REVENUE SUPPORT TO CSTC (1978-84)

<i>Period</i>	<i>Revenue Grant (in Rs. lakh)</i>
1978-79	795
1979-80	739
1980-81	1,016
1981-82	1,079
1982-83	1,300
1983-84	1,657

SOURCE : Home (Transport) Department, Government of West Bengal.

The rise in subsidy level implies low returns on public investments which have to be further replenished from public funds. This indicates a rise in social costs. But social benefits from such investments have declined steadily as reflected in the CSTC's low service outputs.

While the application of more effective techniques for vehicle and personnel management is urgently called for to upgrade service efficiency, financial resources also require to be managed in the best possible manner to enable the CSTC to be self-reliant. Unless the operations are financially viable, additional investments will tend to raise the operating and other expenditures without corresponding income returns or social benefits.

Table 13 records the CSTC's expenditure and revenue pattern by items, over some selected years of its operation. It may be observed that during the CSTC's first decade of operations, operating costs had nearly doubled by 1980-81. This amount had gone up by three times the level in 1970-71. Direct operating costs, excluding depreciation and interest payments, had increased by 56 per cent in the past five years, while revenue earned registered a 40 per cent growth (in nominal money terms). Between 1980-81 and 1983-84, with the CUTP in progress, revenue rose by 21 per cent while overall expenditure increased by 37 per cent.

Among the expenditure items, staff costs show the highest growth rate over the service years. It constitutes nearly 60 per cent of all direct operating costs, being nearly equal to the revenue earned in most years, and even exceeding such amounts, as between 1982-84.

Total kilometrage has not changed much over the last few years, though city kilometrage has diminished. Over the years, however, the expenditure on variable inputs such as fuel, tyres and spares has risen with inflation.

Table 14 shows how prices of high speed diesel have increased over the past 10 years.

TABLE 13 REVENUE EXPENDITURE PATTERN OF CSTC OPERATIONS IN SELECTED YEARS

Item	1961-62	1964-65	1970-71	1974-75	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
<i>Revenue</i>											
Passenger Income	430	493	413	493	742	903	1,179	1,360	1,470	1,528	1,625
Others	56	56	104	126	51	57	39	49	39	43	90
	486	549	517	618	793	960	1,218	1,409	1,509	1,571	1,715
<i>Expenditure</i>											
Salaries	166	208	404	553	761	920	1,110	1,267	1,448	1,736	1,791
Fuel and Lubricant	89	129	100	159	221	246	299	411	509	587	633
Tyres and Tubes	23	36	41	105	137	121	151	158	179	155	177
Spares and Stores	49	63	87	95	104	132	120	156	168	178	190
Rent and Taxes	18	24	22	28	21	24	27	26	28	27	30
Central Workshop	23	59	61	157	121	140	168	137	141	109	107
Miscellaneous (including audit fee, uniforms, maintenance and repairs, sta- tionery, etc.)	16	20	37	56	63	90	107	138	145	150	161
Depreciation	51	31	73	144	206	192	233	409	261	378	546
Interest	36	51	97	260	467	527	601	254	313	335	423
Total Expenditure	471	621	922	1,557	2,101	2,392	2,817	2,956	3,192	3,645	4,058
Surplus/Deficit	(+15	(-72	(-405	(-939	(-1,308	(-1,432	(-1,599	(-1,547	(-1,683	(-2,074	(-2,343

TABLE 14 CHANGE IN PRICE OF HIGH SPEED DIESEL
(1973-74 to 1983-84)

Period	Price/Lit. (in Rs.)
2 March 1974	1.05
18 September 1974	1.10
14 February 1975	1.21
1 December 1975	1.35
1 July 1976	1.36
1 March 1978	1.38
1 March 1979	1.50
23 August 1979	1.68
11 September 1979	1.60
8 June 1980	2.34
13 June 1980	2.25
13 January 1981	2.66
11 July 1981	3.01
1 October 1982	3.09
15 February 1983	3.31
1 April 1983	3.30

NOTE : Sales tax increased from 9 per cent to 12 per cent *ad valorem* with effect from October 1, 1982.

SOURCE : Petroleum Dealers Association, Calcutta and HTD.

It may be noted hereby that changes in the price of fuel have been very frequent. Within this 10 years span, there have been 16 revisions; sometimes three hikes in a year as in 1979, and an average of two per period. The impact of such sudden and frequent changes in fuel price have not been sufficiently incorporated in the CSTC's budgetary exercises, resulting in fuel expenditures always overshooting the planned estimates. It is suggested that for future budgets, the CSTC should consider realistic assumptions about rises in variable input prices, particularly fuel, which is under the grip of a global scarcity crisis.

Revenue earnings in the corresponding years have failed to keep pace with expenditure, though there have been 10 fare revisions between 1960 and 1984, as depicted in Table 15.

Using Tables 13 and 15, a comparison of the respective trends in expenditure and revenue increases between 1980-81 and 1983-84, which is characterized by three fare hikes, reveals:

1. an average annual rise of 11 per cent in expenditure compared to six per cent annual increase in income; and
2. a 14 per cent increase in costs between 1981-82 and 1982-83 as opposed to a four per cent rise in revenue, though there had been two substantial fare hikes within their financial year.

TABLE 15 FARE REVISIONS FOR CALCUTTA CITY BUS SERVICES
(1960 to 1984)

<i>Period</i>	<i>Particulars of Revision</i>
20 January 1960	raised by 1-2 paise for some stages according to recommendation of H.L. Dey Commission, 1937.
26 September 1960	raised by 1-2 paise for some stages.
29 April 1964	raised by 1 paise for all stages.
1 February 1965	rationalised and converted to multiples of 5 paise by rounding of each stage fare to the nearest multiple of 5 paise, with a minimum fare of 10 paise.
1 December 1973	raised by 5 paise for all stages except those above 25 paise (according to recommendation of B. Banerji Commission, 1972).
2 January 1974	following public resentment, a short distance stage fare of 10 paise for 2 kms was introduced.
1 August 1975	10 and 15 paise stages were abolished and minimum fare raised to 20 paise. Public protest could not be registered due to promulgation of national Emergency from 26 June 1975.
23 June 1980	raised by 5 paise for all stages up to the level of 35 paise.
27 January 1981	raised by 5 paise for last stage, 10 paise and 15 paise for 2nd and 3rd stages respectively.
14 February 1983	raised by 10 paise for all stages.

SOURCE : CSTC Records.

The mismatching between these respective trends in revenue earned and spent within this particular time span becomes more conspicuous with the CUTP in progress and additional buses and staff pressed into service thereby. While rising costs without corresponding improvements in service performance indicate the unremunerative utilisation of investment made, particularly on overheads, the loss in revenue could be attributed to two major factors:

1. a steady decline in effective fleet utilization resulting in loss of remunerative trips; and
2. revenue leakage from trips.

Estimates of such leakage over the various years of the CSTC's operations show that annually the Corporation loses between 25 per cent to 30 per cent revenue due to ineffective fare collection procedures, fare evasion by a section of passengers, various unethical practices set up by the running staff, etc. In 1964-65 a survey on revenue leakage

conducted over 28 CSTC city routes 16 revealed that on the average the number of unbooked passengers everyday constitutes 22 per cent of the total payload carried. In 1967-68 the Evaluation Committee set up by the Finance (Audit) Department of the State, reported that leakage consisted of 15 per cent to 25 per cent of total fare collection. In 1975, the N.G. Das Commission Report reveals that investigations conducted on five major routes of the state bus show this estimate to have gone up to around 37 per cent. In 1982-83, revenue leakage remained in the range of 30 per cent to 35 per cent as revealed in the Statistics compiled by the Metro Rail authorities.¹⁷

The B. Banerji Commission offers an explanation for such ineffective collection measures carried out when it points out that:

...The conductors of private buses work on purely commission basis and larger the collection, greater becomes their income, while on State buses, conductors work on salary basis. It makes no difference to them whether they strain their utmost or stand idle while on duty...¹⁸

There may be other explanations besides this and various causes behind such activities, but the fact remains that unless such loopholes are effectively plugged, the CSTC continues to loose a sizable amount each year. Going by the current leakage figure, the Corporation has lost approximately Rs. 600 lakh in 1983-84, almost the amount it spends on fuel and lubricants. Similarly, it can be shown that had the Corporation been more vigilant on this issue, the first decade of its operation could have run on profits rather than burdening successive decades with accumulating losses. Pre-booking of tickets, frequent checks on board as well as bus stops and terminal, and instant and forbidding penalties, are some of the measures suggested to ensure that the CSTC does not loose too heavily due to leakage. Of course, such human factors like efficiency and personal honesty also contribute a lot in minimizing this loss.

Table 16 shows the revenue deficits in terms of unit km of service provided over some selected years of operation. A simple cost-revenue analysis to assess the financial viability of operations may be attempted from this table. The operating deficit per km in 1983-84, excluding non-operating expenditure, is Rs. 3.28, while the overall amount on inclusion of depreciation and interest payments on loans, rises to Rs. 5.60 per km. In other words, for each km of service provided by the CSTC, the State has to provide a subsidy of Rs. 5.60, an amount that has risen 2.5 times that of the 1970-71 estimate.

¹⁷"Economic and Financial Aspects of Calcutta Metro: Some Basic Statistics", *Metro Railways*, 1983.

¹⁸B. Banerji Commission Report in *Calcutta Gazette Extraordinary*, December 8, 1973, p. 6.

TABLE 16 KEY INDICATORS OF FINANCIAL PERFORMANCE OF THE CSTC, (CITY & LDS) IN SELECTED YEARS

Period	(Cost per km in Rs.)							Earnings per km.	Operating Surplus/ Deficit per km	Overall Sur- plus/Deficit per km.		
	Variable		Fixed		Total		Deprecia- tion & In- terest					
	Fuel & Lubri- cants	Spares and Stores	Tyres & Tubes	Staff workers	Central workers	Others						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1961-62	0.19	0.10	0.05	0.37	0.05	0.07	0.83	0.19	1.02	1.08	(+) 0.25	(+) 0.06
1970-71	0.41	0.35	0.17	1.67	0.25	0.24	3.09	0.70	3.79	2.13	(-) 0.96	(-) 1.66
1977-78	0.69	0.32	0.43	2.41	0.38	0.26	4.49	2.12	6.61	2.50	(-) 1.99	(-) 4.11
1978-79	0.68	0.36	0.33	2.56	0.39	0.32	4.64	2.01	6.65	2.68	(-) 1.96	(-) 3.97
1979-80	0.83	0.33	0.42	3.09	0.47	0.37	5.51	1.94	7.45	2.83	(-) 2.68	(-) 4.62
1980-81	0.98	0.34	0.35	2.83	0.30	0.36	5.16	1.56	6.72	3.32	(-) 1.84	(-) 3.40
1981-82	1.20	0.39	0.42	3.42	0.33	0.40	6.16	1.35	7.51	3.56	(-) 2.60	(-) 3.95
1982-83	1.34	0.38	0.35	3.97	0.24	0.60	6.68	1.63	8.31	3.60	(-) 3.08	(-) 4.71
1983-84	1.52	0.45	0.42	4.29	0.25	0.46	7.39	2.32	9.71	4.11	(-) 3.28	(-) 5.60

The operating deficits according to bus type, i.e., for SD, DD and SP services, can also be assessed. This requires stratification of the items of operating expenditure on the basis of some relevant observations.

A stratified model for bus type cost-revenue analysis has been constructed here to help in exploring the possibilities of devising a representative financial model to help in investment decisions for the Corporation. In this model, by varying the determinants within feasible limits, it will be possible to ascertain their impacts on the respective dependent variables. On the whole, such a model will be useful in evaluating the different components of the cost structure, their change overtime, and the scope, if any, to vary their denominations in the ultimate quest for making the services commercially viable.

A Model of Cost-Revenue Analysis for Bus Type

The representative period considered in the present context is 1983-84. Table 16 has been referred for data on costs while those on revenue per km have been obtained from CSTC records.

The following assumptions, which are based on observations, have been used in stratifying the cost items by bus type:

Assumption 1

Salaries of drivers and conductors account for approximately half ($\frac{1}{2}$) the total salary bill of the CSTC.

Assumption 2

Besides the regular contingent of running operators, the CSTC employs change over (called BADLI) drivers and conductors on identical terms and conditions of service. This necessitates the inclusion of their salaries as a component of the total wage bill paid by the CSTC. Such costs need to be distributed as per operational/vehicle requirement. In this case, the distribution may be effectuated in the proportion 3 : 2 for SD and DD : SP.

Assumption 3

Fuel and lubricant costs are to be computed on the basis of actual performance figures (under the existing traffic conditions).

Assumption 4

Costs on spares and tyres are to be distributed over the bus types in proportion to the actual consumption of these items under existing traffic conditions. Here the proportion may be taken as

$$\text{SD : DD : SP} = 4 : 6 : 2$$

Assumption 5

All other fixed costs to remain constant.

Now,

Cost per km of operating a state bus has been computed as follows:

Cost per km	Fuel and = Lubricant cost	Spares + and Stores cost	Tyres + and Tubes cost	Staff + cost	Other + cost	Deprecia- tion and Interest cost
	(1.52)	(0.45)	(0.42)	(4.29)	(0.46)	(2.32)
= Rs. 9.71						

Now,

Following Assumptions 1 and 2, staff cost per km may be computed as follows:

$$\text{For SD} = \frac{4.29}{2} + 2.6 = \text{Rs. 4.74}$$

$$\text{For DD} = \frac{4.29}{2} + 2.6 = \text{Rs. 4.74}$$

$$\text{For SP} = \frac{4.29}{2} + 1.7 = \text{Rs. 3.84}$$

Given actual consumption figures for fuel and lubricants of the respective bus types, following Assumption 3, such costs may be computed using the form:

$$\begin{array}{ccccc} \text{Cost for Vehicle Type} & = & \text{consumption} & \times & \text{price of fuel and} \\ & & \text{rate} & & \text{lubricants} \\ (Cv_i) & & (ri) & & (p) \end{array}$$

In the present context,

Cost of fuel and lubricants for

$$\text{SD} = 0.41 \times 3.50 = \text{Rs. 1.44}$$

$$DD = 0.58 \times 3.50 = \text{Rs. } 2.03$$

$$SP = 0.36 \times 3.50 = \text{Rs. } 1.26$$

Following Assumption 4, cost per km for spares and tyres and tubes works out to be as follows:

$$\text{Cost of spares and stores for SD} = 0.40$$

$$DD = 0.65$$

$$SP = 0.25$$

$$\text{Cost of Tyres and tubes for SD} = 0.40$$

$$DD = 0.65$$

$$SP = 0.25$$

Other costs remaining unchanged, cost per km of service provided by respective bus types may be computed as follows:

$$\begin{aligned} \text{Cost/km for SD} &= 1.44 + 0.40 + 0.40 + 4.74 + 0.25 + 0.46 \\ &\quad + 2.32 = \text{Rs. } 10.01 \end{aligned}$$

$$\begin{aligned} \text{Cost/km for DD} &= 2.03 + 0.65 + 0.65 + 4.74 + 0.25 + 0.46 \\ &\quad + 2.32 = \text{Rs. } 11.10 \end{aligned}$$

$$\begin{aligned} \text{Cost/km for SP} &= 1.26 + 0.25 + 0.25 + 3.84 + 0.25 + 0.46 \\ &\quad + 2.32 = \text{Rs. } 8.63 \end{aligned}$$

Now,

The Revenue earned/km (earnings weighted with daily av. km)

$$\text{For SD} = \text{Rs. } 3.13$$

$$DD = \text{Rs. } 4.56$$

$$SP = \text{Rs. } 3.03$$

(Refer Appendix 1)

The deficit incurred in operating unit km of service by the respective bus types may be computed as follows:

$$\text{For SD} = \text{Rs. } 10.01 - 3.13 = \text{Rs. } 6.88$$

$$DD = \text{Rs. } 11.10 - 4.56 = \text{Rs. } 6.54$$

$$SP = \text{Rs. } 8.63 - 3.03 = \text{Rs. } 5.60$$

In other words, the Government has to pay subsidies of Rs. 6.88, Rs. 6.54, and Rs. 5.60 to provide one km of service run by single decker,

double decker and special buses respectively. It may also be inferred that among the bus types providing ordinary form of city services, the double decker is commercially more viable to operate than the single decker under existing road and traffic conditions. The special bus service is commercially more successful than the ordinary services, thereby requiring less revenue support from the government.

Viewing the situation from all these angles, it may therefore be inferred that inept handling of all resources—human, material and financial, has severely affected the performance of the state bus services and brought upon a crisis in the CSTC where losses can no longer be justifiably offset through increasing subsidies.

A summary of the principal observations gleaned from the above analysis will provide the backdrop for policy suggestions aimed at improving the performance of the services and the organization supplying them.

SUMMARY OF OBSERVATIONS

1. Over the years bus outshedding has not exceeded beyond 70 per cent of serviceable fleet, with effective utilization often as less as 33 per cent.
2. Service output indicators show a declining trend, particularly:

Service kms : 50 per cent fall over 1960-61
 Passenger trips : 63.5 per cent fall over 1960-61
 Average km/bus/day: 84 per cent fall over 1960-61.

3. Due to inconsistencies in the State's policies regarding public transport, in particular giving rise to unhealthy competition between private and state buses, operations and performance of both modes were severely affected.
4. Frequent breakdown of vehicles resulting from non-availability and improper use of spare parts, lack of proper maintenance and technical staff, and use of aged vehicles that have outlived their serviceable lives in the absence of any definite bus replacement policy, have resulted in low outshedding and poor quality of service.
5. In spite of a large human force, productivity of labour is rather low in general and when compared to some other major STUs in India—as is indicated by a very high vehicle-staff ratio and a progressively rising staff-cost per km in spite of declining outputs.

The presence of idle labour, a high degree of absenteeism amongst

running operators and ineffective labour management policies, may be cited as the main causes for this poor human performance.

6. Cumulative revenue deficits over the years has led the CSTC to rely increasingly on subsidies from the State. The operational deficit per km in 1983-84 was Rs. 5.60. Following a cost-revenue analysis for bus types, it has been revealed that the respective approximate revenue deficits (or subsidy paid by state)

For SD=Rs. 6.88/km
 DD=Rs. 6.54/km
 SP=Rs. 5.60/km

It is thereby shown that in Calcutta, the double decker bus is commercially more viable than single decker.

SUGGESTIONS FOR IMPROVEMENT OF PERFORMANCE

In spite of the incessantly poor performance by the State bus over the last 2 decades, it still has the opportunity to refurbish its image. As a state undertaking, it is the responsibility of the government, the main policy maker on public transportation, as well as the CSTC, entrusted with the running of state buses, to see that no further loss of serviceability and revenue take place in the forthcoming periods. Should that happen, it would be counter-productive to continue to run the services in the name of providing maximum commuter welfare, or as a potential sources of employment for the growing army of urban unemployed, when all this would succeed in doing is to permanently main an economically overburdened society.

On the merits of the above analysis, it is suggested that for both short and long run improvement of services and rise in revenue, steps need to be taken in three major directions:

Improving Fleet Operations

The key task here is to increase the daily outshedding to match the serviceable capacity. Under existing condition, 750 buses can be daily outshedded in the short run (2-3 years) while homing in on the long range target of 1000 buses per day. Here the main emphasis should be placed on:

1. Better service planning, through re-scheduling of trips and viability analysis of routes, to carry at least 10 per cent more passengers in the short-run and an amount rise of not less than 5 per

cent in consecutive periods.

2. A definite bus replacement policy, according to the dictates of existing traffic conditions, and backed by adequate funds. Under the existing conditions, vehicle's life should not be considered beyond 4-5 years of active service. Since such vehicles would not be beyond salvage. Their disposal at existing market rates would generate an additional income for the corporation.
3. A proper maintenance schedule, to reduce the breakdown ratio to within 10 per cent, programmes for preventive and corrective maintenance, followed by regular inspections, need to be immediately set up.
4. A proper system of inventory control for spare parts needs to be set up immediately. Maintenance work can be expedited only if there exists a system of regular purchase, proper storage and quick distribution of essential spares. The cannibalization system must be rooted out.

Improving Human Productivity

Here, the main emphasis should be placed on:

1. Relating performance with outputs, incentives linked directly with results.
2. Maintaining strict vigilance, backed by stern disciplinary measures on absentees, idlers, etc.
3. Relocation of personnel, from overstaffed locations to areas that require more attention on the basis of existing and future development programmes.
4. Proper training of running operators and technical staff in consonance with existing and future requirements.
5. Increasing accountability of personnel vis-a-vis their respective functions, since management accountability is virtually non-existent in the organization. Function based re-organization of staff is required where considered necessary.
6. Streamlining of role of trade unions to fit in with social and corporate objectives, minimizing areas of conflict for ultimate social gains.
7. Setting up a management information system to help coordinate all activities relating to human and vehicles.

Improving Financial Performance

The key task here is to minimize losses, maximize collections and strive for ultimate self-reliance. Accordingly, the functions requiring

immediate attention are:

1. Deployment of sufficient buses on commercially viable routes, while restricting supply on non-viable routes on the basis of demand.
2. Linking Revenue support from the State to the operations on non-viable routes rather than all routes, in the process of minimizing the public debt and exploring avenues to earn more.
3. Cutting down on overtime payments, by proper monitoring of duty hours and services performed by relevant personnel. The active participation of Trade Unions in this respect is an essential requirement for positive budgetary planning.
4. Adoption of measures that restrict wastage and/or uneconomical use of fuel, spare parts, tyres and other variable cost items.
5. Applications of suitable marketing techniques and promotional campaigns to boost serviceability and earnings. CSTC land and other infrastructures not directly used for bus garaging/servicing may be developed in various ways to induce commuters to use more of CSTC services and provide better facilities, thereby generating additional income and serving more social purpose.
6. Exploring possibilities of introducing new types of services using existing fleet. For example, a city express/non-stop service between selective points during peak hours increases the scope of additional revenue at little or no extra cost.
7. Plugging the loopholes for revenue leakage through strict vigilance and rigorous monitoring of fare collections on and out of board. Promotional campaigns including advertisement in various media issuing strict warning to commuters and ticket collectors to desist from and discourage malpractices regarding fare collection should be actively pursued. Simultaneously, a scheme of publicly rewarding/felicitating the conscientious and vigilant worker/citizen should be established to step up public interest. For quicker and more effective results, planning and implementation of the above mentioned programmes need to proceed *pari passu*.

CONCLUSION

The role of public transport services in the trafficscape of Calcutta may not appear presently enviable, but is essential. As a mass transit mode of the organized sector, its effectiveness lies more towards its discharge of public duties than towards profit maximization. Rectification of the shortcomings in the spheres of operations, finance and administration, with the objective of providing better services to the public,

and simultaneously generating an environment within the organization which induces optimum productivity, may be considered as the immediate as well as long run corporate aims.

As the city trafficscape continues to absorb more and more competition from the unorganized modes, and passenger demand increases, the CSTC's role assumes greater importance. A quicker response towards the rectifications of the shortcomings is therefore a justified expectation of the citizens from the CSTC as well as the transportation planners and policy makers.

Appendix 1
IMPORTANT DETAILS OF STATE BUS CITY ROUTES (MAY 1983)

Sl. No.	Route No.	Bus Type	Origin	Destination	Route Length (km)	Daily Av. km	Earning per km (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	L1	SD	Ramlal Bazar	Esplanade BBD Bag	11.5/12.5	750	3.3
2.	3A	SD	Thakurpukur	Kankurghachi	21.8	2041	2.6
3.	L3C	SD	Esplanade	Bangur Avenue	10.4	555	3.0
4.	4A	SD	Kundghat	Esplanade BBD Bag	9.4/10.4	1,301	3.5
5.	4B	SD	Esplanade	Baranagar	9.5	698	3.6
6.	4C	SD	Haridevpur	Esplanade BBD Bag	10.0/11.0	405	3.4
7.	7	SD	Hazara	Sarsuna	10.4	1,135	3.6
8.	L7A	SD	Sarsuna	Howrah Station	16.5	1,275	3.0
9.	L7B	SD	Sarsuna	Nimitala Ghat St.	17.4	492	2.5
10.	8	SD	Ballygunj Stn.	Howrah Station	13.1	947	3.4
11.	9A	SD	Santoshpur	Gariahat	5.3	265	3.1
12.	9 (shuttle)	SD	Maniktala	Sech Bhawan (Salt Lake)	12.0	964	2.8
13.	14	SD	Behala	Bengal Chemical	19.5	1,972	3.4
14.	L14A	SD	Esplanade	Labony	9.6	900	4.7

(Continued)

(Continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
15.	L14B	SD	Esplanade	Sech Bhawan Salt (Lake)	12.6	1,150	3.7
16.	L16	SD	Tangra Housing Estate	Shibpur BE College	13.1	465	2.7
17.	L19	SD	Esplanade	Garden Reach Municipal Office	12.0	678	3.1
18.	L20A	SD	Shambazar	Barasat	32.2	1,206	2.0
19.	L20B	SD	Esplanade	Barasat	27.0	643	2.5
20.	L30B	SD	Esplanade	Dum Dum Airport	16.0	763	2.7
21.	L31	SD	Esplanade	Serampore	26.0	495	2.9
22.	34	SD	Esplanade	Ariadha	14.1	1,092	3.0
23.	35	SD	Joramandir	Sealdah	4.6	552	4.3
24.	35A	SD	Joramandir	Howrah Station	10.2	1,100	3.8
25.	35B	SD	CIT Building	Sealdah	5.1	723	4.7
26.	36	SD	Narkeldanga	Sealdah	4.1	625	5.1
27.	38	SD	Sealdah	Mathpukur	4.9	781	3.6
28.	L38A	SD	Sealdah	Ghatpukur	30.0	668	2.0
29.	L63A	SD	Howrah Station	Munshirbat	32.0	783	2.2
30.	L75A	SD	Behala	Bakhrabat	16.0	383	2.3
31.	L91B	SD	Shambazar	Rajarhat	20.0	1,222	2.2
32.	Narendrapur						
	P.O.	SD	Gariahat	Narendrapur P.O.	9.9	—	—
33.	Ladies Spl.	SD	Shambazar	B.N.R.	12.9	—	—
34.	Office Spl.	SD	Phoolbagan	B.B.D. Bag	5.5	—	—

35.	Jhil Mill	SD	Esplanade	Jhil Mill (Salt Lake)	16.8	—	—
36.	Jhil Mill	SD	Sealdah	Jhil Mill (Salt Lake)	15.3	—	—
37.	Belur	SD	Esplanade	Belure Math	18.0	—	—
38.	2	DD	Ballygunge Stn.	Paikpara	17.2	1,674	3.4
39.	2B	DD	Ballygunge Stn.	Bagbazar	15.2	1,347	4.6
40.	3	DD	Kidderpore	Shambazar	16.0	1,278	4.1
41.	L3E	DD	Esplanade/BBD Bag	Amtala	24.0/25.0	696	4.0
42.	5	DD	Garia	Howrah Stn.	17.5	2,168	4.7
43.	6	DD	Garia	Howrah Stn.	16.5	2,095	5.0
44.	8B	DD	Jadavpur	Howrah Stn.	18.1	1,987	4.8
45.	9	DD	Jadavpur Stn.	Ultadanga Stn.	19.7	2,114	4.0
46.	L9	DD	Gol Park	Dunlop Bridge	19.5	2,673	4.3
47.	10	DD	Ballygunge Stn.	Howrah Stn.	11.2	998	5.7
48.	11	DD	Howrah Stn.	Rathala	15.7	1,475	3.9
49.	11A	DD	Hawrah Stn.	Dum Dum Stn.	10.2	1,259	5.8
50.	12D	DD	Thakurpukur	Howrah Station	18.0	820	3.5
51.	15	DD	Howrah Stn.	Ultadanga Stn.	7.0	1,035	7.2
52.	16	DD	Dhakuria	Shibpur	15.9	181	3.7
53.	L20	DD	Esplanade	Barackpore court	29.0	2,235	3.7
54.	33	DD	Chetla	Paikpara	18.5	1,747	5.2
55.	Office spl.	DD	Lake Gardens	BBD Bag/Howrah Stn.	13.7	—	—
56.	S1	SP	Ballygunge Stn.	Howrah Stn.	12.0	575	4.8
57.	S2	SP	Kundghat	Howrah Stn.	13.1	1,095	5.2

(Continued)

(Continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
58.	S3	SP	Esplanade	Nagerbazar	11.5	419	3.8
59.	S4	SP	Parnasree	Howrah Stn.	15.5	716	4.3
60.	S5	SP	Espanade	Lake town	8.9	884	4.2
61.	S6	SP	Ballygunge Stn.	Howrah Stn.	11.9	841	5.2
62.	S7	SP	Garia	Howrah Stn.	16.5	1,475	5.0
63.	S8	SP	Thakurpukur	Howrah Stn.	19.9	993	3.4
64.	S9	SP	Gol Park	Dunlop Bridge	19.2	1,012	3.2
65.	S10	SP	Esplanade	Dum Dum Airport	16.0	500	3.6
66.	S11	SP	Esplanade	Barrackpore	29.0	1,064	2.7
67.	S12	SP	CIT Building	Howrah Stn.	11.9	950	3.8
68.	S13	SP	Sentoshpur	Esplanade/BBD Bag			
69.	S14	SP	Garia	Karunamoyee (Salt Lake)	26.3	2,861	4.9
70.	S15	SP	Dhakuria	Dum Dum Air Port	25.0	1,192	2.7
71.	S16	SP	Thakurpukur	Labony (Salt Lake)	27.0	1,992	3.2
72.	S17	SP	Chetla	Ariadah	21.0	853	3.6

Integrated Computerised Information System for Urban Development

V.R. MOHANARAO

THE INFORMATION system is being thoroughly changed and modified both in developed and developing countries with the introduction of computers, and satellites. Information has become a basic need of the society and part and parcel of any development process. Especially in physical planning, information base is vast. Right information at right time is the heart of the planning process. Traditional way of data collection, storing, analysis cannot meet the challenges of present and future needs of physical planning. Some of the problems arise in the process of urban development because of lack of data/information for planners and decision makers at the right time, in right form and proper analysis. Most of the planning organisations have not yet built up sufficient information system for formulation or evaluation of feasibility reports on urban development projects, for making socio-economic cost benefit studies, for the evaluation and monitoring of development projects, for exercising financial and budgetary control to channelize development in the desired way.

Adoption of computers, aerial photographs, etc., becomes unavoidable in the present state of urbanisation as taking place in India and other developing countries, where any delay in obtaining right information at the right time by planners and decision makers create serious problems. If a scientifically integrated physical planning (urban development) information system could be available to all departments/sections dealing with urban development projects, the existing problems arising due to information gap could be avoided in future. In some cities there are as many as 15 to 20 departments/sections in planning organisations involved in urban development process. It is nearly impossible to provide and exchange accurate data and information between departments/sections in right time for decision-making.

The following model (Fig. 1) of integrated computerised urban development information system has been designed to meet the needs of a typical planning organisation like development authorities, town planning

departments, municipal corporation, improvement trust, etc. Each planning organisation will have 18 to 20 different departments/sections with different responsibilities in plan preparation, implementation and development management. And each section will have six to seven broad areas of data collection, storing, analysis and synthesis to interchange with other sections for inter-agency monitoring and coordination in right time. The following are the names of the departments/sections in a planning organisation and the details of broad areas of data under each department/section.

I. Physical Planning and Coordination Section

1. Planning Principles and Basic Concepts.
2. Planning Standards (Data bank).
3. Planning Models.
4. Planning Maps (Data bank)
5. Land Allotment Process.
6. Land Use Analysis.
7. Review and Monitoring of Development Plan.

II. Land Survey Section

1. Notified Area Land Survey Numbers and Details of Areas.
2. Suvery Maps (Data bank).
3. Land in Physical Possession, Survey Numbers and Areas.
4. Land under Processing and Litigation.
5. Details of Site Analysis and Survey Details.

III. Areal Photo-Interpretation Section

1. Interpretation of Areal Photographs.
2. Data Bank of Maps and Aerial Photographs.
3. Plotting of Maps, Settlement Distribution, Natural Resource Base and Land Use Pattern at Regional Level.
4. Mapping of Natural Drainage Area and Ground Water Availability.
5. Location of Faults and Fractures, Violation of Development Controls.
6. Identification of Sources of Pollution.
7. Regional Transport Network.
8. Estimation of Traffic and Parking Needs.

IV. Economics and Statistics Section

1. Basic Demographic Data Analysis.
2. Rates for Different Landuses (Data bank).
3. Financial Feasibility of Layouts, Schemes...etc.
4. Record of Potential Employment Opportunities in Relation to

Growth of Commerce, Service Industries and Major Industries..., etc.

V. *Social and Rehabilitation Section*

1. Record of Projects Affecting People.
2. Compensation Package.
3. Social Welfare Programmes.
4. House Health Record.
5. Public Health Measures.

VI. *Architecture Section*

1. Design Principles and Standards.
2. Urban Design Forms.
3. Data Bank for Building Designs Drawings.
4. Computerised Alternative Architectural Designs.

VII. *Engineering Section*

1. Engineering Principles and Design Standards.
2. Basic Engineering Data.
3. Appropriate Technology.
4. Computerised Engineering Design Alternatives.
5. Standard Rates for Calling Tenders.
6. Cost Estimation of Works, Scheduling and Programming of Projects.
7. Data bank for Maps and Detail Drawings.
8. Computerised Awarding of Contractors.
9. List of Registered Contractors.
10. Review and Monitoring of Ongoing Works.

VIII. *Material Section*

1. List of Building Materials.
2. Specifications of Different Materials.
3. Procurement Process and Rate at which Purchased.
4. List of Different Materials, Supply Contractors.
5. Process of Issuing of Different Materials.
6. Existing Stock of Materials.

IX. *Transport Planning and Communications Section*

1. Basic Planning Principles and Concepts.
2. Basic Traffic Data and Analysis.
3. Regional Transportation Net Work.
4. Communication Net Work.
5. Mathematical Modelling.
6. Design Standards for Roads, Bridges, Culverts, Intersections, Rotaries, Islands...etc.

7. Scheduling, Monitoring and Review of Ongoing Projects.
8. Traffic Management, Signal System and Sign Boards...etc.

X. *Landscape and Horticulture Section:*

1. Location of Parks, Gardens, Nursery, Play Grounds, Green Belts, ...etc.
2. List of existing different types of Flora and Fauna in the Planning area.
3. Stock of New Seedling Varieties.
4. Manure and Water Requirements and Standards.
5. Scheduling of Plantation Programmes and Monitoring of Plant Growth.
6. Materials Requirement for Maintenance.

XI. *Water Supply Department/Section*

1. Location of Water Supply Lines, Storage Tanks...etc.
2. Source of Water Supply, Quantity, Availability and Time.
3. Scheduling of Water Supply Hours.
4. Existing Supply, Demand and Future Estimation of Demand.
5. Monitoring of Construction of Water Supply Lines.

XII. *Electricity Department/Section*

1. Location of Electricity Main Lines, Feeder Lines, Sub-Station..., etc.
2. Source of Electricity Supply Points, Distribution Net Work.
3. Existing Supply and Demand, Estimation of Future Demand and Supply.
4. Scheduling of Electricity Supply Hours.
5. Monitoring of Construction of Electricity Lines.

XIII. *Marketing Section*

1. Computerised allotment of Houses and Plots.
2. Final Record of Landuse, Rates, Name of the Party and Areas Demarcated..., etc.
3. Existing Stock of Houses and Plots.

XIV. *Estate Section*

1. Handing over of Houses and Plots.
2. List of Old Structures, Safety Index and Possible Repairs.
3. Maintenance of Buildings and Repairs.

XV. *Town Services*

1. Management of Schools, Hospitals and Other Facilities.
2. Garbage Collection, Net Work, Methods and Techniques.
3. Wastage, Available Quantity and Recycling Process.

4. Appropriate Technology for Recycling Process.

XVI. *Environmental and Pollution Control Section*

1. Soil Types, Location and Mapping.
2. Climate, Ecological Features.
3. Flora and Fauna, Carrying Capacity of the Environment.
4. Resources Recycling Methods and Techniques.
5. Keeping Track of Chemical Materials, Stock Points and Movement in the Planning Area.
6. Monitoring of Industrial Pollution.
7. Monitoring and Control of Traffic Pollution.

XVII. *Finance and Accounts Section*

1. Allocation of Funds to various Schemes and Projects.
2. Time and flow of money to various works.
3. Scheduling of Payments to Contractors.
4. Collection of Development/Service Charges.
5. Collection of Repayment of Housing Loans.

XVIII. *Development Control Section*

1. Scrutiny of Building Plans.
2. Granting of Occupancy Certificates.
3. Monitoring of approved and Unapproved Cases.
4. Computerised Scheduling of Site Inspection Visits before stipulated time.
5. List of Registered Architects.
6. Regularisation and Demolition of Unauthorised Structures.

For all the above mentioned departments/sections, data area and their inter-co-ordination and decision-making process has been shown in Fig.

1. Each data area will have one or two soft-ware package programmes which can be used by any other section at any time for reference. There will be one Master Data file and different data files under particular sections. Updating of data base will be done by respective sections. In total, there will be approximately 100 soft-ware packages programmes which will provide integrated planning design, financial feasibility, scheduling and programming of work, monitoring and review, development control and management, directions to the planners and decision makers to take rational decisions in right time and in right direction.

The following soft-ware package programmes have been designed and developed to meet the needs of physical planning and coordination section and development control section.

1. Data bank for physical planning.

2. Financial feasibility of layouts and schemes.
3. Monitoring and review of development plan.
4. Computerised scrutiny of building plans.
5. Computerised granting of occupancy certificates and regularisation of unauthorised structures.

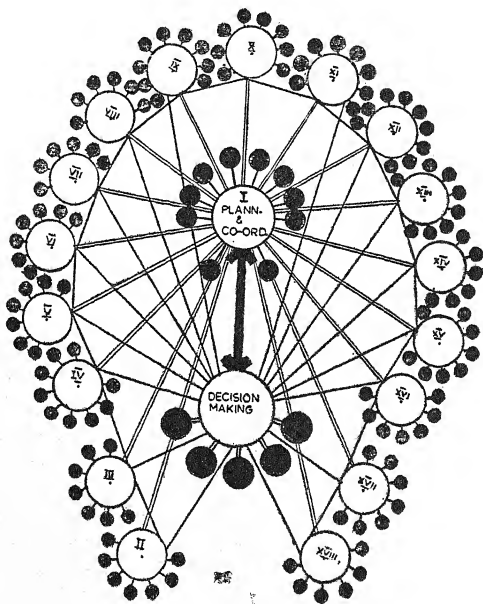


FIG. 1 INTEGRATED COMPUTERISED INFORMATION SYSTEM FOR URBAN DEVELOPMENT

Most of the above mentioned packages could be developed on any micro-computer which is within the reach of any planning organisation. The detail description of the above five package programmes has been given with flow chart (Fig. 2).

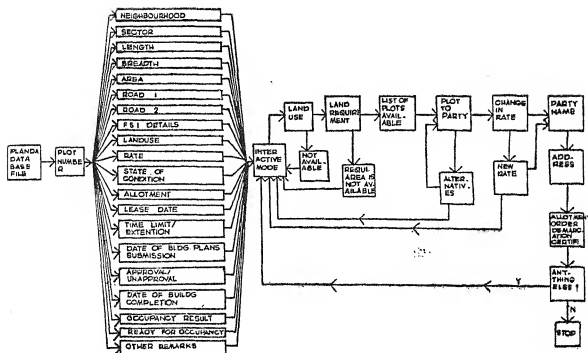


FIG. 2 FLOW CHART OF DATA BANK FOR PHYSICAL PLANNING

DATA BANK FOR PHYSICAL PLANNING

This soft-ware package programme has been designed by incorporating all planning standards and planning parameters to be considered for plan preparation and implementation. This programme provides ready reference to find out planning standards, availability of land under different landuses, plot dimensions, location, accessibility, details of adjoining plots, FSI details, rate per sq. mt., state of condition, allotment lease date, time limit construction, building plans approval/disapproval, date of construction, completion, occupancy granted/refused and for any other remarks.

Whenever there is a clarification needed for any landuse, it is possible to find out from this programme by giving special instructions in an interactive mode with computer. For example, how many plots with dimensions are available under particular landuse? This programme will help in allotment of plots quickly and more efficiently. Allotment process could then be immediately reviewed and data base updated. An allotment order along with demarcation certificate will be printed with all landuse details. If the required land is not available, computer will give appropriate messages indicating reasons.

The working process of the above package programme has been given in Fig. 2.

Demonstration time: Approximately 30 minutes with detail explanation.

FINANCIAL FEASIBILITY OF DEVELOPMENT PLAN (LAY-OUTS) SCHEMES, ETC.

Financial feasibility is the most crucial task for implementing any planning project successfully. The entire project planning depends on its financial feasibility and cost of infrastructure development. Even though planners prepare different design alternatives of lay-outs, schemes, etc., financial feasibility analysis takes a lot of time and planners are not able to know its financial implications till it is done separately. If the project is not financially sound enough, planners have to change the entire lay-out and again financial feasibility has to be done separately. It is a continuous process which takes a long time to get a satisfactory level of financial feasibility which involves huge amount of manual calculations. Some times planners may not be having that much time to do financial feasibility with different development plan alternatives. In this process, computer can be effectively used to get immediately financial implications of any development plan, lay-outs and schemes, which gives a good feedback on design alternatives that again gives an opportunity to planners to select the best design alternative.

This soft-ware package programme has been designed by incorporating all planning data and landuse analysis, like project area, land acquisition, preliminary works and surveys, roads, pathways, water supply, sewerage, storm water drainage, street lighting, arboriculture and other facilities like schools, hospitals, bus-stand, shopping complex, community centre, etc., and total saleable area and project period, to be considered under different heads for detailed financial analysis. By entering the above planning data, it is possible to obtain cost of infrastructure development per sq. mt. and with a nominal administrative expenditure the reserved saleable price for type of landuse. If the above output is not satisfactory, by keeping on changing the data or rates, a satisfactory financial analysis could ultimately be obtained. The package programme also generates the alternative pricing system for different landuses. After final output is reached, computer prints the entire financial report in the required form for decision-making purposes.

The working process of the above package programme has been given in Fig. 3.

Demonstration time: Approximately 30 minutes with detail explanation.

MONITORING AND REVIEW OF DEVELOPMENT PLAN

Monitoring and Review of development plan is no longer a routine, traditional process and repetitive job, it has, in fact, become these days highly a technical job that requires managerial skills. Monitoring of plan implementation has to be viewed in the context of planning process.

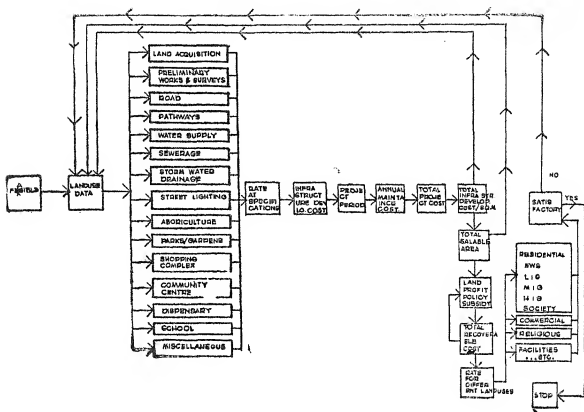


FIG. 3 FINANCIAL FEASIBILITY OF DEVELOPMENT PLAN

The planning process involves analysis of situation, setting of goals and objectives, generation of development plan alternatives, selection, of alternative which is cost effective, implementation, monitoring of implementation, feedback and review thus again redefining goals and objectives and so on. Monitoring and review of development plan implementation has to be seen in this context. Monitoring of development plan is a must during it's course of implementation because so many agencies would be involved in the implementation process and coordination will be the most crucial task for the planners to perform. Hardly there is any efficient system of monitoring and review of development plan in development authorities and in municipal corporations. Unless development plan is backed by efficient system of monitoring and review, the plan is not likely to achieve its goals and objectives. With the help of computer, it is possible to build on efficient system of monitoring and review of development plan during it's course of implementation.

This soft-ware package programme has been designed and developed to meet the requirements of any typical area development plan, layouts, schemes, etc. After preparation of plan, during it's course of implementation, planners need to know the latest data on plan implementation to decide the future planning strategies and to provide necessary facilities, services and utilities for the increasing population in the planning area. The following data may be required for this purpose:

number of people purchasing the plots, their place of migration, number of plots sold for different landuses, number of applications received for building permission, number of approvals granted, monitoring of construction, number of applicants for granting occupancy certificate, number of approved/unapproved cases, number of buildings completed in a year, number of tenements ready, total population of the area, density, status of services and facilities in the planning area, etc.

According to updating of data base daily with the available information to the concerned sections, the other planning parameters will be updated and total population and density would be calculated with the latest data all the time. According to increasing population all the facilities, services and utilities will be monitored and reviewed by this package programme. Computer gives indications to provide or upgrade necessary facilities, services and utilities in the planning area. Appropriate message will be printed on the computer terminal indicating type of facility to be provided or upgraded.

The working process of this package has been given in Fig. 4.

Demonstration Time: Approximately 30 minutes with detail explanation.

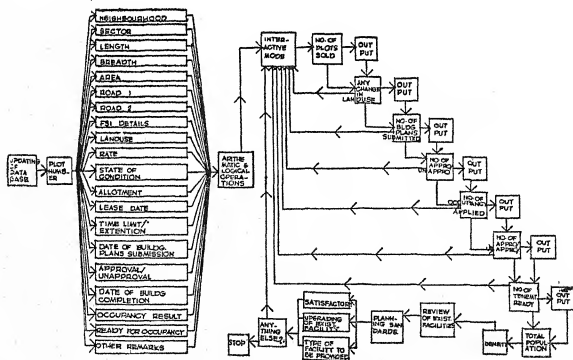


Fig. 4 COMPUTERISED MONITORING AND REVIEW OF DEVELOPMENT PLAN

COMPUTERISATION OF BUILDING PLANS SCRUTINY

The purpose of the enforcement of building bye-laws and regulations is to promote better quality of life in towns and cities. Usefulness of

computer in enforcement of building bye-laws and regulations is given in detail in following paras.

Violation of building bye-laws is common in the plotted development areas. To construct buildings on plots, owners submit their building plans to the competent authority for approval. In any municipal corporation or development authority, one will find huge number of building plans awaiting for approval. Often applicants bring various kinds of pressures on competent authority to get it approved as early as possible because of several reasons like to get building loan from banks, advancement of monsoon, water shortage, power problem, increasing material cost, etc. Generally, it is difficult for the competent authority to dispose all the cases equally and quickly because of various reasons like lack of manpower and time, unillustrated building drawings, poor quality drawings, etc. Sometimes competent authority is not able to dispose of cases in a stipulated time under the applicable Act because of above reasons and also due to heavy workload. In a day, it is possible only to give approval or unapproval to few cases considering all the building bye-laws and regulations applicable to the cases. Quite often, public keep on complaining to the competent authority for slow processing of building permission cases.

Often people read through newspapers the members expressing concern in Assembly and in municipal meetings about public complaints regarding slow processing of building plan approval and its related problems. The delay leads to cost escalation in construction of proposed residential buildings. If no sanction is forthcoming within 60 days of the submission of building plans, these plans are deemed as approved. Some plot owners, while submitting building plans, simultaneously start construction of houses anticipating approval according to submitted building plans, which may not be granted in all cases because of some violation of bye-laws. During this 60 days of time limit, construction work goes up to plinth level and above. If the building plan is rejected, it is difficult to regularise the structure and it is termed as an unauthorised construction. One can find significant number of cases like this in towns and cities, which spoils the quality of physical environment in towns and cities.

Generally building bye-laws are violated due to two reasons. The first reason is that owner deliberately wants to get more built-up area than permissible to get more monetary benefits. Second, contractor's mismanagement and because of unskilled labourers at work site several deviations crop up in construction. It is possible to control such unauthorised constructions to certain extent by introducing computerised scrutiny of building plans and monitoring system and by providing quick, efficient service to the public. In fact, public will be pleased to

receive the computerised service in this case. A computer package has been developed for this purpose in "Fortran" on IDM S-50 computer. This potential popular public package has been named as "Ajanta" which stands for the integrated aesthetic form of natural, physical, social and cultural environment of the society.

METHODOLOGY

The above said package "Ajanta" has been designed by incorporating all zoning, sub-division regulations and building bye-laws applicable under MRTTP Act of 1966, which have been built in the package in the form of several simple mathematical equations and logical arguments and their process structure. A data coded format has been designed which is part of the package taking into account all regulations and building bye-laws. The Architect while designing building for his client, fills up the data coded sheet and gives a declaration along with plot owner that the data given is correct. For filling up of data format he takes about an hour or so. Plot owner/architect will submit the data format along with four copies of building plans to the competent authority for its approval. At the competent authority's office, preliminary checking of documents will be done by inward/outward clerk/section. Later on competent authority will send the data format for computer scrutiny. All the data given in data format will be fed into computer in a time range of 10-15 minutes and result will be printed immediately along with necessary—certificates approved or unapproved.

The package processes is the data of 200 variables to the standard building bye-laws and regulations built in the programme. The programme performs arithmetic and logical operations with entered data of 200 variables at a high speed and prints out the result. Before getting the final verdict of computer, all the data (dimensions) will be cross-checked four to five times in the programme to avoid any manipulation of data.

The programme calculates the built-up areas of the plot. The programme has the flexibility to calculate the built-up area with different shapes and combinations of the like, rectangle, triangle, trapezoid, circle, circle-sector, circular-segment, hexagon, octagon, polygon, etc. It also checks the FSI calculations, scrutiny fees, security deposit fee, additional premium (in case), front and rear marginal distances, side margins, minimum road dimensions and areas, area of light and ventilation, widthwise and depthwise division of site dimensions, height controls, stair case details, balcony area and projections, *chajja* projections, compound wall details, etc.

In case of violation of the 200 variable dimensions against standard regulations, bye-laws, appropriate message will be printed indicating the

violation and also correct bye-laws and corrected dimensions. If everything is correct satisfying all building bye-laws and regulations, building approval certificate will be printed. If any small mistake is encountered, corrected version will be printed indicating the required corrections. It will then print out the building approval certificate.

Only in the case of FSI violations and manipulated break-up of site dimensions, it will print out the disapproval of building permission. The total time for one case in scrutiny by computer takes around 10 to 15 minutes. With this speed, it is possible to scrutinise about 25 to 40 building approval cases per day.

Properly filled data format in all respects will still increase efficiency and speed of processing by computer. The package also offers efficient system of review and monitoring of approved and unapproved cases.

In the meantime, competent authority will have time to check the case for any subjective matters relating to the building bye-laws. After receiving the result of the case from Computer Section along with printed certificates, final checking will be done by the competent authority and the case will be disposed off positively the same day if not, definitely the next day.

The existing process of scrutiny of building plans and computerised scrutiny of building plans has been given in Figs. 5 and 6.

Demonstration time: Approximately 30 minutes with detail explanation.

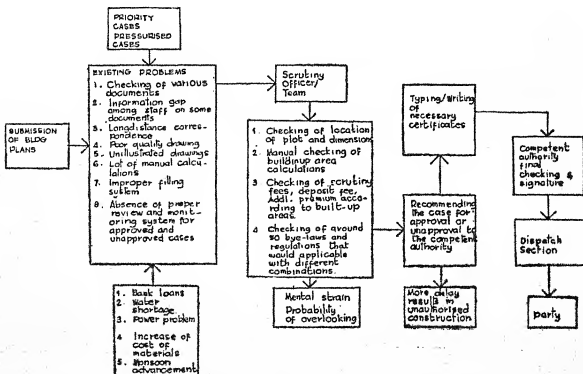


FIG. 5 PRESENT SYSTEM OF PROCESSING OF BUILDING PLANS

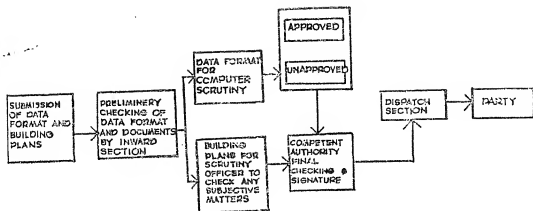


Fig. 6 COMPUTERISED SCRUTINY OF BUILDING PLANS

Probably CIDCO in Maharashtra will be the first Corporation in the country to introduce computerised scrutiny of building plans and review and monitoring system, of the approved and unapproved cases.

COMPUTERISED REGULARISATION OF UNAUTHORISED STRUCTURES

The purpose of enforcement of building bye-laws and regulations is to promote better quality of life in towns and cities. But violation of building bye-laws is very common in our towns and cities which has become a big problem, resulting in unauthorised structures which are degenerating the quality of the physical and social environment of towns and cities.

Often people read in the newspapers about the elected representatives in municipal and assembly meetings showing concern about the problem and suggesting different solutions to tackle this problem. However, some people believe to demolish unauthorised structures. On the other hand, some people express that this problem should be seen on humanitarian ground and hence should be regularised with some penalty or so; most of the people favour regularisation as the solution to this problem. In the process of regularisation, the competent authority has the following problems:

1. Lack of detailed stored information on the extent of violations in each respect.
2. Involving mass quantity of checking, comparing and other calculations.
3. Equalising different extent of violations into monetary penalties, special concessions or to demolish them.
4. Difficult to find out compromising solution to the case by taking

above three categories or to find out different alternatives with above three categories to regularise the case.

To overcome the above problems, computer can be used to find out compromising solution with different alternatives and to increase efficiency of the unauthorised structures; regularisation process. For this purpose, a computer package has been developed in "Fortran" on IDM S-50 computer, system. The package has been named as 'Regula'. The software has been designed, by incorporating all building bye-laws and regulations applicable under MRTP Act of 1966. Unauthorised structure's regularisation index has been prepared by taking the extent of different violations of unauthorised structures. The Index places the violations in any of these three groups: 1. Special concessions, 2. Monetary penalty, 3. Demolition. This Index has been incorporated in the package in simple mathematical equations and in logical arguments. A data coded format has been designed which is part of the package. It provides details of extent of violations of building bye-laws and regulations.

All the data given in the data format will be fed into computer. Before getting the final verdict of computer, all the data will be cross-checked four to five times in the programme to avoid any manipulation of data. The programme performs arithmetic and logical operations with entered data and checks extent of violation of time limit, built-up areas, required fees to be paid, front, rear and side margins, minimum room dimensions and areas. Area of light and ventilation, widthwise, division of site dimensions, height controls, staircase details, balcony area and projections, chhajja projections, compound wall details, etc., are also indicated.

According to Index, the entered data will be processed and result will be printed immediately along with necessary certificates indicating the case under the three categories. Special concession, monetary penalty amount to be paid in Rs. and parts to be demolished for regularisation of the unauthorised building structure are also indicated in the print out.

With the above package any number of unauthorised building cases can be regularised within a little time.

The package details are shown in Fig. 7.

Demonstration Time: Approximately 30 minutes with detail explanation.

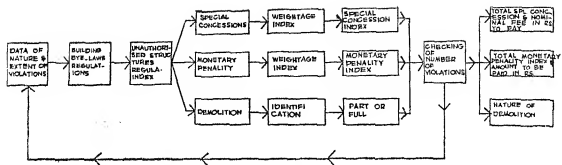


FIG. 7 COMPUTERISED REGULARISATION OF UNAUTHORISED STRUCTURES

Book Review

Social Aspects of Urban Development, H.D. KOPARDEKAR, Bombay, Popular Prakashan, 1986, pp. 392 + viii, Rs. 200.00.

The book under review deftly combines the acumen of a Civil Engineer, the art of a man of literature, the skill of a town planner and architect, the craft of a sociologist, and an awareness of the matter-of-fact situation of an administrator, all combined together to shape the views of the author. Having published a series of papers on various aspects of urban development and socio-economic analysis of development the author has attempted his hands at a case study of the pattern of urban development drawing upon his first-hand knowledge and experience of process and pattern of urbanisation and urban development in the State of Maharashtra in India.

As an urban Sociologist and a professional urban planner, the author has looked at the practical social aspect of development trends and the urban growth processes in India in the light of the case study of urbanisation pattern in Maharashtra.

The twelve chapters of the book arranged in four parts discuss the various aspects and dimensions of urban development. Part one which is introductory in nature, demarcates and discusses scope, methodology, general hypothesis, theoretical background and historical perspective of urbanisation and urban development.

Part two deals with the trends of urbanisation in India especially, the characteristics of the urban areas, and emerging pattern.

Part three presents an indepth and detailed case study of the trends of urbanisation in Maharashtra, particularly, the trends and policies of urban development and urban growth; and the approaches, to the development problems.

Part four presenting almost an overview, presents the basic issues of the planning process of urbanisation and urban development, while attempting to update the study with the inclusion of the postscript and by furnishing data from 1981 Census. Bibliography somewhat updated with the addition of half a dozen books published after 1980, and subject index enhance the overall usefulness of the book for students, researchers and general readers interested in acquiring a further under-

standing of the process of urbanisation and urban development from the sociological view-point.

No single factor has influenced the social life today in such a big way as the process of urbanisation. In the West, the process of industrialisation was responsible for a particular pattern of urbanisation. In the developing countries of the Third World, urbanisation has not the same relationship with industrialisation. The pattern of urbanisation in the Third World country is the direct result of socio-economic and political conditions. The aim, as the author says, is to analyse the correlation between urbanisation pattern and social development in developing countries on the basis of examples from Maharashtra pattern of urbanisation the attempt is to focus attention on the pattern of urbanisation as an indicator of the overall processes in society, particularly, on the pattern that has been in the post Independence period in India. The shift is towards big cities; emphasis is on migration to big cities where the social process is exploitative, and biased in favour of a few rich having command over resources and decision-making machinery. He considers Maharashtra pattern as a very good case study for the Third World country. But the author's view that "the urbanisation pattern is an indicator of the pattern of society as a whole" is not quite convincing. His views seem to be greatly inspired by and derived from the views of some other scholars. Even after three decades of planned development fruits of development are yet to be received by a large section of population (Dandekar and Rath 1971). The investment in housing and urban development benefitted the rich most (Minhas 1971). There is a growing disparity in cities, and growth is benefitting the affluent section (A.R. Desai; Dagli 1973). Heavy concentration of economic activities is in cities like Bombay and the rest of the state is backward. (Dandekar 1973; Moonis Raza 1985).

The Five-Year Plan papers and other documents talk of balanced growth and emphasise dispersal and decentralization of growth. But there is some inherent contradiction at the root of development process itself displayed by urbanisation pattern. Various planned programmes, such as, the housing and other social amenities generally benefitted the rich rather than the weaker sections of society.

The author citing reference to some Gandhian and Sarvodaya group of scholars, and making reference to the view-points placed by Jawaharlal Nehru, refers to certain features of the urbanisation process in India which led to the formation of a dual society in India, such as, rural where the growing population is living on traditional farming; and urban-industrial where the unbalanced growth both spatially and socially, and disparities are markedly visible. In the planning era, countries in the Third World took to mixed economy, planning for economic development, and modernising traditional societies. By and large, there is

development on capitalistic lines, conditions of majority of the people are deteriorating. People are attracted to big cities where poverty, unemployment, under-employment, insanitary conditions, health problems and slums are growing in larger sections; only a small section of society is growing richer. Public, semi-public and private agencies all plan on capitalistic lines. The resources are controlled by the elite and some profit more than others. In this urbanisation pattern some pressure group exploits the situation. Those controlling resources control other factors of production, including land which is an object of speculation. This has happened in Bombay, this is happening in Delhi, and this will happen in most other cities following along the present line of urbanisation. Masses do suffer. The process of modernisation and social change benefit a few and not the large society.

Part two of the book divides urban centres in India into four well-known categories *viz.*, large metropolitan cities like Bombay, Calcutta, Delhi, etc., having more than one million people; (2) large cities having more than one lakh people; (3) Medium size cities having more than 20,000 to one lakh people; and (4) the remaining small towns having population between 5,000 and 20,000. These small towns are declining. In metropolitan cities, particularly, Delhi, the observation is that middle class is fast vanishing with the polarization of housing standards. Many new social groups which have been created in the Maharashtra pattern of urbanisation are there in other growing cities. These social groups form the upper strata: the property owners, builders, contractors, industrialists, businessmen, civic and higher level leaders, administrators, journalists, middle men who derived benefit because of position and status. Masses of the lower strata are getting crushed day by day. Smugglers and criminals find a protected place in these big cities. Families are becoming closed units with consequent social problems due to mounting stress and strain, new tempo of life, high intellectual life, and wealth.

Traditional moral values are getting lost. Truth has become a casual value. Social values have suffered a decline. People are becoming more and more money minded; and work ethic is fast on decline. Influence of religion in a new form is on increase. The official prayer, worship festival, religious songs, patronage of saints have increased without having much good impact on individual member's work ethic, norm and behaviour pattern.

The big cities have produced their dysfunctional effect on family, kin, marriage, etc. Slum residents, pavement dwellers, overcrowding have increased.

Land values in these metropolitan cities, as the author says, now range between Rs. 50 to Rs. 5,000 or more per sq. metre depending upon the location, services, facilities available (pp. 188). In reality, the situa-

tion in the metropolitan cities, like Delhi, is more aggravating. "The common man suffers either at the hands of the builders and property dealers or the DDA which fixes prices by public auction which has raised the prices of land between Rs. 5,000 and Rs. 10,000 per sq. yard in South Delhi" is the observation made by the Delhi High Court (*Times of India*, dated 21st November, 1988). Cultural pluralism in big cities has increased. Small towns and rural areas are declining.

Part three of this book points to the policies which are marked by disparity and imbalance. Policies refer to balanced development, advancement of all sections, social integration, economic growth and justice. But the various surveys depict conditions which cause greater disquiet. Inequality, exploitation, callousness, beggary, prostitution, crime are on increase. For the bulk of population, living conditions are deteriorating steadily. Numerous social groups, rather 'Sub Societies' have been growing with 'little communication', says Tarlok Singh. Various Five-Year Plans proclaimed balanced development, dispersal of industrial growth, development of rural areas, amelioration of conditions in congested cities, and planned development. These cannot be achieved unless there is a positive "curb on the growth of big cities".

We need to go to the 'root of the problem' and not merely take up programmes to tackle 'bits and parts' of the problem. We need to think of the rigid basic framework behind urbanisation and urban development pattern.

Part four of this book raises some basic issues. The major issues raised are socio-economic. According to the author, the socio-economic consideration of urbanisation and urban development cannot be neglected. Urban life suffers stress and strain, yet, larger cities and urban agglomerations attract people of all shades of life. Development is, by and large, on capitalistic lines. The condition of majority of people has declined. Urbanisation trends continue to benefit only those who control the resources, or decision-making machinery; yet the poor people, the marginals, labourers, all migrate to big cities for alternative source of livelihood. Land is a scarce resource, and an object of speculation and investment. Urbanisation process is expropriated for the benefits of a few. Urbanisation pattern is such that many of its factors can be manipulated by a few for their advantage.

The writer suggests the need to take up basic type of research as considering the whole process of urbanisation, and also examining the foundations of society.

This research was completed in 1975-76; but it has been somewhat updated by providing data based on 1981 census. By the data provided the conclusion reached is "growth rate is rapid in big cities, and the smaller cities are declining". "Maharashtra has continued to remain the most urbanised state in the country." "The number of large cities is in-

creasing, small towns are declining; land, an object of speculation and manipulation is to the benefits of a few, or, to the benefits of the interest groups".

Kopardekar like Dr. Clyde Mitchell makes a situational analysis, where he starts from the premise that urban conditions are a reflection of the wider economic, political, and social context in which the towns are set. Aristotle observed that "men come together in cities in order to live; they remain together in order to live the good life"; but in today's cities men came together principally to earn a living. Cities are developing as 'sick cities'. Lewis Mumford called the cities as 'disease' themselves. It is appropriate to quote Mumford, "Metropolis is an accumulation of people accommodating themselves to an environment without adequate natural or cultural resources; people who do without pure air; who do without sound sleep, who do without a cheerful garden of playing space, who do without the very sight of the sky and the sunlight, who do without free motions, spontaneous play. The so-called blighted areas of the metropolis are essentially do-without areas. Living in such a city you may live and die without even recognising the loss". Unplanned urbanisation and unchecked growth and development of the metropolis may well lead to a chaotic conditions as predicted by Lewis Mumford in his 'culture of cities' in 1938. India is in the process of experiencing the same situation in its big cities today.

Kopardekar's book is a valuable addition to the list of few studies on urbanisation in this direction. The author deserves to be congratulated on making a bold, unbiased and objective study based upon his in-depth and detailed situational analysis of the urbanisation process in Maharashtra. Many more studies of this type in different regions will help the policy process on urbanisation and urban growth in India, and other developing countries of the Third World.

—R.N. THAKUR

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Editorial

POVERTY is the worst form of deprivation. Even after four decades of planned economic development, a substantial proportion of India's population is living in abject poverty and glaring deprivation. The disparities with all its intensities and manifestations are found to be much more conspicuous in urban than in rural India primarily because of huge concentration of population in the urban settlements. Our towns and cities especially the metropolitan cities epitomise the grave social inequalities and economic disparities. The hiatus between the affluent and the economically downtrodden sections is constantly on an increase. Despite a constant increase in the gross domestic product, about 28 per cent of the urban population is below the poverty line. In absolute terms, it comes to about 5.7 crore. If the existing calorific definition of poverty line is changed to include shelter and other forms of deprivation, the number of people living in poverty will be much larger.

The poverty situation in urban India gets exacerbated by substantial rate of migration from the rural areas where the subsistence and even below-subsistence level of living compels a large number of rural population to flock to the towns and cities in search of sources of livelihood and income opportunities. Migration accounting for about 40 per cent of the growth in urban population, has been instrumental in converting the rural poverty into urban. A substantial segment of the migrants coming to the urban settlements end up living in slums, sleeping on the pavements and leading a destitute life.

This indeed seems to be a very sad commentary on planned economic development. This calls for evolving a strategy, at the macro level, for economic transformation such that the fruits of development percolates to the deprived and the poor. The awareness to have such a strategy started crystallising in the mid-sixties when limitations of sectoral planning was increasingly realised the

world over. It was very rightly thought that sectoral planning is not able to provide an effective solution to the complexities of economic and social systems as also the new concern for the environment. An 'integrated' approach to planning and development was therefore not only thought to be appropriate, it was also adopted by several countries the world over. India, to begin with, adopted it in the realm of rural development and later on for the planning and development of urban settlements as well. Accordingly, a programme for the Integrated Development of Small and Medium Towns (IDSMT) was launched in the Sixth Five Year Plan as the centrally-sponsored scheme. More than two hundred towns have been brought under this continuing scheme for promoting an integrated development of the towns and their hinterlands as also for integrated provision of services in the selected towns. However, instead of being an effective strategy for the development of small and medium towns, it soon got reduced to a 'shopping list' for grand, beautiful and aesthetic schemes.

Urban planning, wherever, it has been in vogue in Indian towns and cities, except for a very few exceptions, has not yet been able to come out of the Master Plan outfit which is primarily preoccupied with urban design, city form, zoning regulations—all having negative policy stance rather than concerned with the generation of income and employment which happens to be the critical problems in the Third World countries. Even the anti-urban poverty programmes, so far tried at the national level, are limited in scale and cosmetic in approach and are unlikely to have any dent on the problem.

A basic change is therefore called for in the approach to urban planning and its integration with the national economic planning framework. This needs to be supplemented by devising appropriate short-term poverty alleviation programmes as a package for improving the economic status as also for fulfilling the shelter and socio-cultural and infrastructural needs of urban poor.

The special number on Urban Poverty is a modest attempt for focusing on various facets of urban poverty and policies for its alleviation. Though the response to our efforts to give a comprehensive coverage to the various dimensions of urban poverty could not be extensive, hopefully, it will prove to be a valuable addition to the literature on urban poverty and will be able to create dialogue on one of the challenges the urban India is expected to

face in next couple of decades. The articles included in this special number deal with a wide area of urban poverty.

Girish K. Misra traces the development programmes in the spheres of housing, slums improvement, small town development, urban basic services and self-employment. He has reservations on the definition of poverty on the basis of nutritional requirements only. He feels that urban poverty should be measured by taking into account various elements of deprivation and special needs and conditions of the most vulnerable groups in the society. In view of the deficiencies of the programme he gives useful suggestions for bringing about improvements in the anti-poverty programme. A pre-requisite for this, he argues, is to develop an urban information system for programme formulation. The programme itself needs to be made participatory in nature so that it is relevant and effective.

V.D. Lall also questions the validity of measuring poverty on presumptive income or calorific requirement. He not only pleads for changing this approach in favour of a more serious study of income pattern of the so called urban poor, but the scope of such a study be extended beyond the realm of income to include also the saving behaviour of the group from the estimated or presumed level of income, their assets holding and financing of assets and lumpy expenditure. He thus believes that the measurement of poverty should include an assessment of several financial and economic parameters. He analyses these issues on the basis of data obtained from the study of about 2,000 households living and/or working in informal sector in more than 25 towns all over India. The data collected from these studies come as a challenge to the impressionistic views that the low-income households and the settlements are the pockets of poverty and that they are not capable of saving in such income condition. The data prove that these are myths. Lall therefore suggests the development of a more extensive data base on the identified parameter of economic conditions of the urban poor at sufficiently disaggregated levels in terms of income groups. Distinguishing between abject poverty and poverty in terms of specific income levels, he purposes to evolve a two-pronged strategy for them.

Urban poverty is, by and large, identified with informal settlements and informal sector. R.K. Wishwakarma traces the conceptualisation of poverty and its dimension for comprehending the informal sector. He distinguishes two important factors giving rise to informal sector and the increase in its size. First, the capital

intensive nature of industry has limited scope for employment generation and second, a very high rate of growth of population in urban area has incapacitated them to create jobs. He frowns upon the planners for their elitist bias and ignoring the needs of informal sector while formulating the blue-prints for urban development even though the informal sector makes available relatively cheap labour in the towns and cities. As for the policy measures for informal sector, he feels that since it is not an individual entity in itself but is interlinked to the productive economy as a whole, the development strategy for its independent growth may be self defeating.

R.N. Thakur goes on to explore urban poor by trying to find out answer to questions like: Who are the urban poor? Where do they live? What do they do? What culture do they acquire and transmit? What values do they imbibe? He studies urban poverty by analysing their relative deprivation in terms of income, unequal distribution of resources, access to public services and opportunities to grow and develop as full social being. He dwelves on broader issues in poverty alleviation by examining the efficacy of redistribution of resources, a social organisation more egalitarian in character, maximising network of welfare services, restricting private ownership and control of resources, community participation and good will based on interdependence, self-help, and willing cooperation.

V.R. Krishna Iyer looks at deprivation in terms of inaccessibility of the poor to the established legal system. In a forceful and eloquent style which is typical of Krishna Iyer's writings, he laments that despite socialistic rhetoric, the Indian republic is inhabited by an enormous layer of have-nots. The imperial heritage in the field of law does not seem to have any impact on the life of the people. Drawing extensively from the case laws, he argues that the law subserves the interests of the class which dominates the law makers. Even when the law seems to wear the mantle of equal justice, it is operated by official engineers in a discriminatory manner. He, therefore, feels that our socialist republic needs a social justice jurisprudence. He pleads for a socially sensitive socialist jurisprudence to shape up on the basis of a concrete critique of the prevailing system from a dialectical angle and this in turn must catalyse specific mutation in our jurisprudential conceptions. The existing legal system is not accessible to a vast bulk of population. He offers useful suggestions for making them accessible to the poor.

Mathew believes that though informal sector and its size has widely been defined and described, the central functions of this sector within the economy is relatively a neglected area. He therefore probes into this. Distinguishing between 'informal sector' and informalism he shows his predilection for the latter as a 'more correct term' and traces its conceptual evolution for comprehending the basic theoretical basis behind 'informalism'. He argues that capitalism has a specific function of maintaining informalism—a reservoir of unemployed and partly employed labour which helps it to keep wage rates persistently low. If the lots of workers in informal sector have to be improved, he suggests a greater integration of the labour markets. This will improve the economic status of the sector itself. He, however, admits that organising workers in the informal sector is a difficult task primarily because the common issues on which they can be organised are relatively less. He therefore pleads that the social activist should develop more common issues on which the workers of formal and informal sectors could cooperate.

Even though a very low and even below-subsistence level of income characterises the poor, Ravinder Singh Sandhu interestingly attempts to analyse savings and indebtedness among the poor on the basis of a case study of slums in Amritsar city located in the most prosperous state of India. He has selected Amritsar particularly because the slum dwellers in this city, unlike those in the extensively studied metropolitan cities, belong to the same socio-cultural group and live in better housing conditions. Sandhu comes out with interesting findings. More than two-fifths of them save regularly for meeting their social obligations and emergency needs. They keep their savings in the post offices, banks or spend them on buying gold ornaments or on improving their houses.

The scale of poverty is so large and its nature so complicated that public intervention alone is unlikely to have the desired result. It needs to be supplemented by the efforts of socio-cultural groups and non-government organisations. The voluntary organisations are supposed to play a very important role in both conceptualisation and implementation of anti-poverty programmes. Renana Jhabwala and Usha Jumeni highlight the economic plight of women in Ahmedabad and the substantial contribution made by the Self-Employed Women's Association (SEWA) in their economic upliftment. Describing the petty jobs done by the women in the informal sector and the problem faced by them, they lament the existing official attitude of indifference towards this vulnerable section of

the society. Jhabwala and Jumeni in fact provide a methodology for organising the poor for securing their legitimate rights for economic advancement. They give several useful suggestions in this regard which could serve as valuable guidelines for urban planners and administrators. The main strength of their article lies in the narrative accounts of two destitute ladies in Ahmedabad who were struggling for their economic living amidst all socio-economic odds and indifferent and even negative attitude of the public authorities and how they were not only secured their fundamental right to earn their living but were also converted into formidable force for securing such rights for other women folk.

Surendra Nath deals with the policy response of the state government in Madhya Pradesh which happens to be the first state to have evolved extensive programme for poverty alleviation. He therefore first analyses the overall anti-poverty schemes launched at the national level. He then enumerates the programmes launched in Madhya Pradesh for improving the lots of economically weaker sections in the towns and cities of various sizes. These include; (i) setting up, for the first time amongst the Indian states, a Department of Urban Welfare for devising and implementing the programmes for the upliftment of urban poor, (ii) granting of tenurial security on public lands, (iii) Environmental Improvement Programme in the clusters of permanently settled hutments, (iv) Special Training and Employment Programme for urban poor, (v) Group Insurance Scheme for rickshaw pullers, tongawallas, hand cart pullers, loaders/unloaders in the *mandies* in the age-group of 18-59, and (vi) UCD and the basic services programmes. He evaluates the implementation of seemingly a wide gamut of anti-poverty programmes and offers useful suggestions for effectively dealing with urban poverty.

P.K. Muttagi analyses the status of urban poor in Bombay which is the premier commercial and financial centre of India. He depicts the deplorable economic and environmental conditions of urban poor in Bombay and suggests launching of a couple of anti-poverty programmes for improving their economic conditions. For this he feels the need to bring about a basic change in the strategy. The new strategy has to be based on an integrated approach for providing solution to all the basic requirements of urban poor so that action on behalf of the poverty groups leads to continuing mutually re-inforcing process of increasing productive employment

and incomes. He comes out with several suggestions to help the poor in Bombay.

The next couple of articles deal with one of the basic needs—the shelter. Chetan Vaidya makes a study of community initiative in this regard in low income area. He believes that in order to bring about significant improvements in housing and basic infrastructure, the public and private sectors must cooperate each other. He presents six case studies of community initiatives in low income areas in Madras, Surat and Baroda. Arising out of these case studies, he concludes that the low income households are capable of helping themselves for provision of shelter and low-cost infrastructure given certain positive support by public agencies.

Despite several strategies for housing the poor, the growth of squatter settlements continue to mushroom. Where do we go from here? S.K. Sharma puts this basic question. He answers this question by taking a fresh look at the existing shelter programme. Reviewing the various strategies and programmes tried so far for housing the poor, he believes that they are neither likely to meet the shelter needs of the poor nor will be able to control the growth of squatter settlements. He emphasises to change the present attitude of treating 'housing' as a mere project having starting and finishing points. Instead, it needs to be viewed as a continuing and ever changing process. He therefore suggests to alter the sequence of development. The existing sequence of site, service, people and shelter in sites and services programmes and the people, sites, shelter and services as prevailing in squatter settlements needs to be changed to people, shelter and services for the best order of development. In such scheme of things, squatters will be given a site with no services except drinking water as per rural standard. Other services could be provided over a period of time. With a view to implement such a new strategy, he suggests introduction of far reaching changes in institutional culture and implementation strategies.

Malla Reddy studies yet another very significant need of the urban poor—the health care which, by and large, is lacking in the low income areas basically due to poverty. This is done by conducting a case study of slum improvement programmes in a slum of Hyderabad where health services happen to be an important component of the programme. He finds this programme a great success as it has been able to provide maximum coverage and has been able to ensure community participation. He believes that it is due to a

right combination of men, money and material. However, as the number of slums is increasing in Hyderabad, the health services need to be augmented by increasing the number of health centres. He gives suggestions for making the programme still more effective.

—Editor

Development Programmes for Urban Poor

GIRISH K. MISRA

THERE are new priorities in the Third World regarding population and social development. These call for reaching the most inaccessible of urban poor with programmes intended to integrate them into the broader society and help them achieve an adequate living standard. The lack of management capabilities, however, is often a substantial bottleneck to these efforts. This article primarily deals with various development programmes offered by the government for improving the living conditions of urban poor. It examines their success and failure with the help of little knowledge that is available at present, and suggests remedial measures to make them more effective in times to come.

URBANIZATION AND URBAN GROWTH

The urban population of India was about 160 million in 1981. Although this number is only 23.53 per cent of the total population, the above magnitude is large in absolute terms and further more than 60 per cent of the urban population is dwelling in cities with one lakh or more persons. Cities with five lakh or more population are registering a faster growth rate as compared to other categories of towns. This lopsided urban development has created enclaves of population explosion in a few cities which, in turn, has made the urban land a scarce commodity. Firstly, this has resulted in an increase in the number of slum and squatter dwellers in the metropolitan cities. Secondly, this has exerted pressure on the existing services like drinking water, housing, sanitation, transport, etc., in all the urban centres.

The share of urban population has increased from 16.7 per cent in 1951 to 23.53 per cent in 1981. If the present trend of urban-rural growth differential of two per cent per annum continues, the share of urban population would rise to a little over 31 per cent in 2001 AD. This implies that though the majority of population would continue to be rural, the increment to the urban population would be nearly half the increment

to the total population. Over the next two decades a little under eight million people would be added to the urban population every year.

This abnormal growth rate of urban population coupled with the unplanned or haphazard expansion of the city boundaries leads to environmental pollution and ecological degradation at the macro structure due to the lack of adequate infrastructural and service facilities to provide a decent living to the poor in urban areas. It is not that the government is quite unaware of the problem. On the contrary, since the introduction of the First Five Year Plan in 1951, the Government of India has invested a considerable sum of money for the planned development and growth of cities and towns through its various policies and programmes. However, despite all these efforts the problems of poor and hapless migrants from the countryside have got aggravated over time and due to certain anomalies at the stage of policy formulation and the programme implementation, the problems of slums and squatter dwellers have remained unsolved for years together.

URBAN POVERTY

On the basis of a daily nutritional requirement of 2,400 calories per person for rural areas and 2,100 calories per person in urban areas, the Sixth Five Year Plan (1980-85) has defined the poverty line in terms of 1979-80 prices as per capita monthly expenditure of Rs. 75 for rural areas and Rs. 88 for urban areas. Hence, persons whose monthly expenditure is Rs. 88 or less are considered below the poverty line in urban areas.¹

According to the official estimates, about 27.7 per cent of the urban population was below the poverty line in 1987-88. An NIUA study on "Who the Poor Are" found that 68 per cent of their sample was consisted of women and children. If we add to this the aged and the disabled, the customary perception of urban poor would immediately change. Therefore, it is necessary to take into account the special needs and conditions of these most vulnerable groups in any poverty alleviation programme.

In fact, poverty cannot be characterised adequately in terms of income, expenditure or consumption patterns alone. Measurements of urban poverty should be delineated and defined to include various component elements of deprivation in quality of life. The time has ripened to broaden the concept of poverty by incorporating the criterion of the normal life span. The urban poor should be provided with the means not only for immediate physical survival but also for ensuring the nor-

¹Girish K. Misra, "Development Programmes for Urban Poor," Girish K. Misra and M. K. Narain (ed.), *Development Programmes for Urban Poor*, New Delhi, Indian Institute of Public Administration, 1989.

mal expectancy of life.

It was in the Fifth Five Year Plan that the issue of poverty removal appeared initially as a dominant objective in India's development strategy. The plan, however, made no distinction between rural and urban poverty. In the Sixth Five Year Plan, a definite approach to poverty issue was marked. It provided for moving nearly 61 lakh persons above the poverty line essentially through the provisions of additional consumption benefits and more equitable distribution of health and basic services. The Seventh Five Year Plan constitutes the first conscious attempt to address urban poverty issues directly.² Firstly, it takes explicit note of growing incidence of poverty in urban areas. Secondly, it notes that in order to be effective, the problem of urban poverty would require a major thrust towards employment generation and creation of productive jobs.³

DEVELOPMENT PROGRAMMES FOR URBAN POOR

In the quest for alleviating poverty and improve the condition of urban poor, several programmes have been launched by the government from time to time. These include programmes in the areas of urban housing, environmental improvement of slums (including, water supply, sewerage, paving of streets, storm water drains and community lavatories), minimum public health facilities integrated with family planning, expanded integrated programme of information, child development service, adult education and elementary education for children up to the age of 14 under the Minimum Needs Programme (MNP), Urban Basic Services (UBS) programme, Integrated Development of Small and Medium Towns (IDSMT) and the new scheme for Self-Employment Programme for Urban Poor (SFPUP) in metropolitan, urban and semi-urban areas.

Urban Housing

The National Building Organisation (NBO) estimated the housing shortage in 1981 around 21 million dwelling units (16 million in rural areas and five million in urban areas). The shortage in the urban areas by the turn of the century would grow to 9.3 million. Considering such a high magnitude of housing shortage and limited availability of capital, the role of government in the field of urban housing has remained mainly promotional. It has been restricted to the improvement of slums, direct

²Government of India, *Seventh Five Year Plan, 1985-90*, Vol. II, Planning Commission, 1985, p. 292.

³*Report of the National Commission on Urbanisation*, Vol. II, August 1988, p. 97.

provision of housing to the weaker sections of the society and encouragement and support of housing finance institutions. The Economically Weaker Sections (EWS) Housing Programme has succeeded in constructing 65,432 shelter units in the public sector during the Sixth Plan period (1980-85). The goal for the Seventh Plan is a little higher. It is hoped that the Life Insurance Corporation (LIC), through recycling of funds and fresh operations, might put together resources of about Rs. 800 crore for Housing and Urban Development Corporation (HUDCO) for supporting EWS and low-income housing schemes. But still the actual number of houses built fell short of the needs of the poor and failed to reach the poorest among them. Generally, the cost of house provided did not suit the life style of the poor. To overcome these difficulties more stress has to be given to the 'sites and services' programme. HUDCO is also laying great emphasis on this programme backed by cash loans. The futility of public housing lies in the fact that in the schemes of Housing and Urban Development Corporation (HUDCO) and LIC, the so called "low cost" housing does not take into account the income of urban poor. A loan amount of Rs. 5,000 provided by the government also falls short of the actual requirements. Consequently, in many cities of India, the housing programmes for urban poor have failed to generate the desired results. Besides, neither central nor the state governments have been successful in raising necessary financial resources to provide housing that conforms to the conventional building codes. More important than the lack of funds, is the failure of the urban planners to encourage self-help housing by revising existing housing standards so as to make them flexible and accessible to the urban poor. Thus, we have what Turner calls "mismatches between personal priorities" of the poor and "housing conditions" imposed by urban planners and governmental legislatures.

Perhaps, the only way out to solve the housing problem of urban poor is to reduce the cost of construction by using mud in place of cement and bricks. This, of course, is to be supported by the available technical know-how for construction. The time has come when the government should recognise that fully legal housing is not affordable by urban poor. At this juncture, the concept of "informal housing markets" should receive its due attention. A great variety of housing is available in these markets to suit the needs and budgets of different groups of the poor.

The biggest weakness of the housing sector is the non-availability of long-term finance to individual house builders on any significant scale. To fill this lacuna, the creation of National Housing Bank (NHB) and Urban Infrastructure Development Finance Corporation (UIDFC) was proposed in the beginning of the Seventh Five Year Plan period. The NHB would have to ensure that income targeting, with a view to accommodating different categories of population and maximising the benefits,

is kept in view by the housing finance intermediaries while advancing credit for home loans.

A doubt is often expressed about the availability of finances for urban poor from the NHB in case it followed the conservative policy. However, the Government of India is very serious about this issue and it is trying to make urban poor accessible to both conventional and non-conventional assets. The UIDFC should also finance in areas where urban poor are located.

Environmental Improvement of Slums

Since 1950, the government has implemented several schemes to rehabilitate slum dwellers in a better social environment in government-sponsored resettlement colonies. However, as the programme of resettlement of squatter dwellers has not been successful in checking the growth and proliferation of squatter settlements, the government has substantially increased investment under the Environmental Improvement of Slums (EIS) programmes. Steps are also taken to provide security of tenure to the slum dwellers so that they may develop a stake in maintaining and improving their habitat.⁴

During the Sixth Five Year Plan, of the total population of 33.1 million needing attention under the EIS programme, about 13.6 million was supposed to be benefitted, thus leaving a balance of 17.5 million slum dwellers yet to be provided relief during the subsequent Five Year Plans. The total outlay for EIS in the state plan works out to Rs. 269.55 crore for the Seventh Plan.

Integrated Development of Small and Medium Towns (IDSMT) Programme

In order to ensure a balanced distribution of population and to reduce the growth of metropolises, a centrally-sponsored scheme of Integrated Development of Small and Medium Towns was introduced during the Sixth Plan. The Sixth Plan made a provision of Rs. 96 crore in the central sector with a matching provision in the state sector for the development of about 200 towns. The actual expenditure during the Sixth Plan period, however, amounted to about Rs. 61 crore in respect of 235 towns. The Seventh Plan has earmarked Rs. 88 crore to continue this scheme, whereas during the Sixth Plan the programme was applicable to small and medium towns having a population of less than one lakh, the Seventh Plan proposed to extend the coverage to towns with up to three lakh population.

The guidelines for IDSMT scheme clearly emphasise that for proper development of these towns, it is necessary that an integrated develop-

⁴Government of India, *Task Force on Housing and Urban Development, Shelter for the Urban Poor*, New Delhi, Planning Commission, September 1983,

ment programme of each town is drawn up keeping in view its locational importance and linkages in the region. This calls for preparation of a regional and sub-regional spatial plan prior to selection of towns for development. But, in practice, in most of the beneficiary states, no such regional or sub-regional spatial plans were prepared to guide the identification of towns for inclusion in this scheme.

As stated by the Task Force on Housing and Urban Development, the policy and programme interventions of the Five Year Plans in this behalf have been half-hearted and loosely coordinated. Spatial considerations have never received attention. Unfortunately, the IDSMT programme instead of becoming an active strategy for strengthening the economic base of small and medium towns, has thus proved to be cosmetic in its nature and content.

Urban Basic Services Programme

In January 1985, the three UNICEF assisted urban programmes, viz., (i) Urban Community Development (UCD), (ii) Small & Medium Towns Development (SMTD), and (iii) Low-cost Sanitation were brought under a single umbrella and called the Urban Basic Services (UBS) programme. The programme aims at improving the quality of life of the urban poor, especially the women and children who are the most vulnerable.

The UBS strategy aims at systematically linking community efforts with those of the government. This is done through a three-tier system with community volunteers at the base who are supported by para-professional workers. These para-professional workers, in turn, are supported by highly trained professionals. Thus the professionals are freed from routine tasks which can be handled at the other two levels.⁵

In the UBS approach, the efforts of the government are to help people to meet their own needs more effectively.⁶ It seems to provide a broad spectrum of services such as:

1. child care and other health services;
2. water and sanitation facilities;
3. community education and health education;
4. early learning opportunities for children, i.e., pre-schools, creches, etc., and
5. training for women in income generating skills.

It is estimated that nearly 3,00,000 children living in urban slums die annually due to diarrhoea-dehydration. Nearly 50 per cent of infant

⁵National Institute of Urban Affairs, *Responding to the Child in the Urban Setting*, New Delhi, 1986.

⁶See W.J. Cousins, *Improving Basic Services for Urban Poor*, New Delhi, UNICEF, 1984.

deaths occur on account of complications arising due to malnutrition and lack of sanitation and personal hygiene. A significant portion (27%) of urban children in age group of five to nine years does not attend school. Even the limited available services are inequitably distributed with poor having little or no access to them. The UBS programme, in fact, has been designed to improve their awareness and access to these basic services. The programme has adopted a community based approach whereby low income families are to participate in identifying their needs, deciding priorities, planning the sequence of implementation and helping the authorities in evaluating progress.

This programme covers 36 districts of 23 states and Union Territories and is extended in a phased manner to cover all towns and cities in the selected districts. It is a national programme involving the participation of central government, state government and UNICEF. The cost of the programme is shared between them in the proportion of 20, 40 and 40 per cent, respectively.

Through this strategy, basic services can be provided in an affordable manner. It also ensures a large coverage of area due to savings as a result of community involvement. For example, in Hyderabad, over 180 pre-schools were opened by voluntary groups on a self-supporting basis; and over 2,000 durable houses were constructed on a self-help basis using bank loans within a short span of about three years, as a result of community awakening, organisation and action.

The mixing up of UBS programme with urban basic services is not desirable. The programme concentrates on two things. One on the process, *i.e.*, community participation and the other is that it tries to secure the convergence of services. In the latter case, it is necessary to have UBS Project Officer being the senior IAS officer so that coordination among service agencies could materialise. Unfortunately, in the UBS programme the financial allocation is too insignificant to attract a senior IAS officer. Also, whereas the programme implementation is within the purview of administration, the coordination falls outside it. This has created a lot of strain within the municipal administration. The community participation in the programme should not be totally in terms of organisations but also in financial terms. It is the task of the community to mobilise resources for their development.

Self-Employment Programme for Urban Poor (SEPUP)

The Government of India in the Ministry of Finance implemented a programme for providing self-employment to the urban poor in 1986 by earmarking a sum of Rs. 200 crore as credit to be distributed to poor urban entrepreneurs whose income does not exceed Rs. 600 per month. The programme aims at helping identified eligible families living below the poverty line to undertake self-employment ventures with the help of

subsidy and bank credit. The programme is to be implemented by selected branches of public sector banks only in metropolitan, urban and semi-urban centres with population exceeding 10,000 as per 1981 Census. Not more than one beneficiary for every five hundred population (1981 Census) from the city or town in the above category is to be assisted under the programme. An assistance up to Rs. 5,000 depending on unit cost is admissible to an eligible beneficiary under this programme for undertaking activities like rickshaw-pulling, weaving, shoe repairing, carpentry, pottery, book binding, vegetable vending, tailoring, *agarbathi* making, tyre-retreading, etc. In all, about 25 activities have been identified. Loans under the programme carry an interest at 10 per cent per annum. Interest is to be charged to the loan account half-yearly with the due date coinciding with the due date for interest to be paid on the subsidy deposit. The loan amount is to be repaid in 33 equal monthly instalments, after a grace period of three months to be provided in all cases.⁷

The borrower is eligible for subsidy computed at 25 per cent of the amount of assistance given to him. The amount of subsidy is to be claimed by the banks from the Reserve Bank of India. Interest is to be paid on subsidy deposit at the rate of interest applicable to the relevant term of maturity according to the directives issued by the Reserve Bank of India.

However, the programme does not seem to be well-conceived. The assumption that a good number of small scale activities would develop mutual linkages, sectorally and spatially, too appears to be untested. The programme is a telling example of un-planned, *ad hoc* approach to problems of economic development. In a poor economy with long period of interia and blockages of positive spread effects, a planned approach to initiation of new economic activities taking into account socio-economic and administrative aspects is essential. The SEPUP has not been devised in the framework of natural, sectoral or regional planning. Hence the chances of the scheme getting caught up in unexpected traps are quite palpable.⁸

The National Commission on Urbanisation has examined the available evidence on the impact of the various programmes—centrally-sponsored, state-sponsored and locally initiated. The overall conclusions are:

1. the reach of the programme is limited;
2. there is a high degree of inflexibility;

⁷For the details of the Programme, see, letter No. SP (SE) C2/C 65 (UP)-86/87 from the RBI to the Chairman dated July 14, 1986, Managing Director of all public sector banks.

⁸K.N. Kabra, "Urban Poverty, Unorganised Sector and Self-Employment Programme for Urban Poor" in Girish K. Misra and M.K. Narain, (ed.), *op. cit.*

3. even the targets are often missed;
4. there is a lack of convergence of programmes; and
5. barring the Hyderabad/Vizag UCD projects, the programmes are still working on a laboratory scale.

The Role of International and Non-Governmental Organisations

International agencies like the World Bank, Overseas Development Authority (ODA), World Health Organisation (WHO), United Nations Children's Fund (UNICEF) etc., are supporting various programmes for the development of urban poor. For example, the Slum Improvement Project of the Municipal Corporation of Hyderabad is supported by the British Overseas Development Administration. The World Bank is also assisting such programmes in Bombay and Madras. UNICEF is concentrating on its Urban Basic Services Programme. The Norwegian Agency for International Development (NORAD) is assisting public sector undertakings/corporations/autonomous organisations in undertaking projects aimed at income generation among women from weaker sections on a sustained basis.

Voluntary organisations, educational institutions and training centres are particularly involved in delivering preventive and promotional health and social nutritive care services for women and children in several urban centres. The participants of these organisations can ensure private initiative in solving local problems with the help of locally developed technology and can prove to be remarkably cost effective in programmes like shelter, environmental improvement and provision of health and nutrition.

SUGGESTIONS

In the light of above discussions, the following suggestions can be made to make the development programmes for urban poor more effective:

1. One of the serious problems in formulating of anti-poverty programmes for urban poor is the absence of basic socio-economic data. An attempt, therefore, is needed to establish an urban information system.
2. There is a mismatch between need priorities of the poor and the policies and programmes as formulated by planners and decision-makers. This creates problems in optimising the efficiency of programmes. The benefits of the housing and other programmes do not reach the poorest of the poor. Hence, the programme design requires effective participation by the poor in their formulation.

3. The setting up of Urban Infrastructure Development Finance Corporation would greatly help in financing services in the areas where urban poor are located. Therefore, the government should take a decision urgently to set up Urban Infrastructure Development Corporation.
4. Urban Basic Services Programme is biased in favour of higher income groups and they tend to distort the contact between the frontline bureaucracy and the urban poor clientele group and the process reinforces the disadvantages under which the poor generally live. Hence there is a need to integrate different sectors of infrastructure within an overall plan and bring it under a unified public utilities and services distribution agency, which will ensure flexibility and equitability in the distribution.
5. The programme of "Sites and Services" (plotted development) is not exclusive of the programme of upgradation of services. It has not been implemented properly and, therefore, both have to be made complementary to each other.
6. Schemes for the provision of urban services should take into consideration affordability and the paying capacity of urban poor which vary from person to person and from one urban situation to another depending upon the occupation, level of skills, etc.
7. Since the urban poor cannot afford the housing in open legal market, the government intervention is necessary to see that the programme for the urban shelter are not constrained by the application of these bye-laws.
8. The Self-Employment Programme for Urban Poor will undoubtedly provide financial assistance to urban poor but it is doubtful whether it would have significant effects unless they are helped to shift from lower level production of goods and services to higher levels yielding greater income. Besides SEPUP, there is also a need for a programme on the lines of Training of Rural Youth for Self-Employment (TRYSEM). It may be entitled "Training of Urban Youth for Self-Employment" (TUYSEM).
9. It is not only necessary that development programme should generate employment at least at minimum wage rates, but also these should help in the development of technical skills for their productivity and upward occupational mobility.
10. Towards making the urban development programmes financially self-sustaining particularly those designed to benefit the poor, there has to be a proper mix of employment and income generation schemes and services. □

Savings in the Midst of Urban Poverty: Need for a New Approach to Assess Urban Poverty

VINAY D. LALL

THERE is a general tendency to measure poverty, in terms of financial parameters, only with reference to the level of income. Very often even this measurement is based on the concept of presumptive income, the income being estimated on the basis of a quick visual observation of the physical conditions/environment of the urban poor settlement, especially in informal human habitats, and through discussions that bring out little evidence of awareness of the situation at the field level. A more common approach is to convert minimum calories intake into monetary values as the poverty cut-off point. These approaches need not only to be changed to a more serious study of the income pattern of the so-called urban poor, but the scope of such study to measure poverty should be extended beyond the realm of income to include also the saving behaviour of the group from the estimated or presumed level of income, their assets holdings and financing of assets and lumpy expenditures. An integrated assessment of several financial and economic parameters must be introduced in the assessment of urban poverty.

In this article, I have examined these issues on the basis of data that have been generated by the Society for Development Studies (SDS) over the last five years on the economic status of about 2,000 households who live and/or work in informal sector human settlements in more than 25 towns all over the country.

SOME MYTHS

Two commonly-held misconceptions, or rather myths, on low income households and settlements are that these are pockets of poverty in the urban areas and that no saving takes place, or is possible, in such economic conditions. There is a tendency among planners, economists and bankers to wash their hands off their responsibility in terms of making special efforts for promoting savings by the urban poor, by conclud-

ing that at the low levels of income (as assumed by them) in slum and squatter settlements/urban informal sector settlements, the marginal propensity to save does not exist and, on that premise, they do not think it worthwhile to make any special efforts to tap the likely savings of such households. At times, such line of thinking is sought to be further extended by economists, of a highly conservative variety, by pleading that at levels of income, which are inadequate to provide even proper meals, it would be dangerous and also unethical to expect people to save and even criminal to persuade them to save.

This highly restrictive, and rather defeatist, approach to the issue of urban poverty, I fear, is due to lack of direct interaction with the urban poor and lack of awareness of their real conditions. In the perspective of development programmes that have to be prepared and implemented to uplift the standard of living and the quality of life of the poor, it is extremely desirable to look not only to extreme poverty but also for 'signs of hope' even in apparently dismal economic scenario, because these 'signs' are most likely to show the path to future prosperity.

The lack of adequate data and understanding on household budget of the poor and their saving behaviour and saving habits is one major deficiency in the existing state of research and data, which is now being recognised as a major reason for overlooking the saving potential of this rapidly increasing segment of the urban population and generalising that the urban poor can only be 'poor'.

DATA BASE ON URBAN POOR ECONOMIC STATUS

Over the last five years, the SDS has developed, on the basis of selected sample studies, a significant data bank on the economic conditions and problems of the urban informal sector households, which include a large proportion of households that fall in the category of the urban poor. The coverage of the data as also the quality of the data have improved over time, with better understanding of the issues, awareness and appreciation of the data gaps and experience in generating data in an area of socio-economic research, where cross-checking of data is extremely difficult and official records almost non-existent. These data were generated through policy-related research studies undertaken on behalf of the Union Ministry of Urban Development, National Capital Region Planning Board, Slum Wing of Delhi Development Authority, Maharashtra Housing and Area Development Authority, Government of Maharashtra and Assam State Housing Board.

ECONOMIC CONDITIONS: RECENT EVIDENCE

Some of the main results of the latest SDS study: "Saving Mobilisation for Housing" (October 1988) are presented to provide recent

evidence on the economic conditions in urban informal settlements. This study was undertaken on behalf of the Ministry of Urban Development, Government of India and covered 777 informal sector households in 13 towns.

- (a) Only 3.9 per cent of the households have a total monthly income of less than Rs. 350, 29.9 per cent have between Rs. 351 to Rs. 600 and 45.8 per cent between Rs. 601 to Rs. 1,000. On the other end of the scale, 5.2 per cent of the informal sector households have a monthly income of more than Rs. 1,500 and 15.2 per cent between Rs. 1,001 and Rs. 1,500 (Table 1). The income data relate to two calendar years 1984 and 1985 and the average for the period 1981-85.
- (b) An important feature of the income pattern of even the so-called urban poor is that they have periods of relatively good income in some of the months in the year.
- (c) A study of the composition of household budget of the urban poor shows that avoidable expenditures (expenditures which could not have been met without first meeting basic needs of food and shelter) are quite considerable. Entertainment accounts for 1.4 per cent of household budget in income group less than Rs. 350, 3.1 per cent in the income group Rs. 351 and Rs. 600 and

TABLE 1 INCOME STATUS OF URBAN POOR: STUDY OF INFORMAL SECTOR HOUSEHOLDS

	<i>(No. of Households)</i>					
	<i>Income Groups in Rs.</i>					
	<i>Upto 350</i>	<i>350-600</i>	<i>601-1000</i>	<i>1001-1500</i>	<i>Above 1500</i>	<i>Total</i>
All India	30(3.9)	232(29.9)	356(45.8)	118(15.2)	41(5.2)	777(100.0)
Delhi	—	48(39.3)	48(39.3)	14(11.6)	12(9.8)	122(100.0)
Madras	—	25(43.1)	21(36.2)	9(15.5)	3(5.2)	58(100.0)
Bangalore	1(2.6)	12(24.0)	19(38.0)	14(28.0)	4(8.0)	50(100.0)
Kanpur	2(2.6)	12(15.3)	52(67.7)	10(12.8)	2(2.6)	78(100.0)
Nagpur	2(5.0)	20(50.0)	7(17.5)	7(17.5)	4(10.0)	40(100.0)
Jaipur	—	9(15.0)	44(73.3)	7(11.7)	—	60(100.0)
Patna	15(15.8)	22(23.2)	53(55.7)	5(5.3)	—	95(100.0)
Gwalior	3(7.1)	21(50.0)	9(21.4)	9(21.4)	—	42(100.0)
Trivandrum	—	1(1.2)	37(44.6)	32(38.5)	13(15.7)	83(100.0)
Ghaziabad	2(3.4)	18(31.0)	35(60.4)	3(5.2)	—	58(100.0)
Bhubaneswar	3(8.6)	23(65.7)	7(20.0)	2(5.7)	—	35(100.0)
Sonepat	2(5.0)	20(50.0)	17(42.5)	1 (2.5)	—	40(100.0)
Srirampur	—	1 (6.2)	7(43.7)	5(31.3)	3(18.8)	16(100.0)

NOTE: Figures in parentheses are per cent of total in respective town.

3.4 per cent in the income group Rs. 601-Rs. 1,000. Loan repayment, which indicates capacity to take out a part of income from meeting basic needs, accounts for 2.4 per cent, 1.5 per cent and 1.4 per cent of household budget, respectively in the three income groups. Expenditure of urban poor in the income group less than Rs. 350, is seen on also items which do not indicate abject poverty: education, medical treatment, transport, power, fuel. Food absorbs only 56.2 per cent of the household budget, clothing 5.1 per cent and housing 4.1 per cent. Household budget data of households with income less than Rs. 350 do not, bring out an image of abject poverty (Table 2).

- (d) Even among the lowest income group (household monthly income less than Rs. 350), there is some evidence of ownership of assets. About 20 out of 30 respondents in this income group (66.7%) own some conventional assets, particularly agricultural land. Their average asset holding is of the value of Rs. 12,350. Some 19 respondents (63.3%) own non-conventional assets of an average amount of Rs. 3,526. In the case of the income group Rs. 351-Rs. 600, 49.6 per cent of the income group own an average amount of Rs. 29,252 of conventional assets and 97.4 per cent own an average amount of Rs. 3,823 of non-conventional assets (Table 3).
- (e) Even the urban poor incur some lumpy expenditures periodically. Some 10 of the households in the income group of less than Rs. 350 (33.3%) incurred an average lumpy expenditure of Rs. 1,700 and in the case of 77 households (33.1%) in the income group of Rs. 351-Rs. 600, the amount was Rs. 4,857 (Table 3).
- (f) It is important to examine the pattern of financing the asset holdings and lumpy expenditures. These data were not generated by income groups but some idea is available for all informal sector households taken together in each of the 13 sample towns. These data show that personal savings financed 18.0 per cent of the asset holding and 65.0 per cent of the lumpy expenditures, the proportion being small for assets as 54.8 per cent are inherited. Further, the proportion of personal savings is higher in relatively lower income urban centres, which is indicative of the significance of saving efforts in financing lumpy expenditures in the lower income households (Table 4).

Tables 1 to 4 present a synoptic view of the economic conditions of urban poor in terms of the above-analysed parameters.

SAVING BEHAVIOUR AND PATTERN

A very critical parameter that casts doubt on the contention of abject

TABLE 2 MONTHLY HOUSEHOLD BUDGET OF DIFFERENT INCOME GROUPS IN INFORMAL SECTOR SETTLEMENTS

		<i>Upto Rs. 350</i>	<i>Rs. 351 to Rs. 600</i>	<i>Rs. 601 to Rs. 1,000</i>	<i>Rs. 1,001 to Rs. 1,500</i>	<i>Above Rs. 1,500</i>	<i>Total</i>
1. Food	A	66.7	100.0	100.0	100.0	97.6	98.6
	B	263	350	460	656	904	475
	C	56.2	48.1	50.4	47.6	45.5	48.7
2. Cloth	A	46.7	88.4	96.6	99.1	100.0	92.8
	B	34	62	80	102	131	80
	C	5.1	7.5	8.4	7.4	6.8	7.8
3. Rent	A	50.0	81.0	88.2	83.0	73.2	83.0
	B	48	111	129	220	341	145
	C	4.1	3.6	5.2	6.4	7.8	5.4
4. Education	A	46.7	49.1	72.5	85.6	95.1	67.7
	B	27	54	60	103	159	77
	C	7.7	12.4	12.4	13.3	12.9	12.6
5. Transport	A	20.0	61.6	59.8	72.0	82.9	61.9
	B	21	55	56	82	129	65
	C	2.0	4.7	3.6	4.3	5.5	4.2
6. Entertainment	A	13.3	51.7	59.3	78.8	97.6	60.2
	B	32	44	53	72	98	58
	C	1.4	3.1	3.4	4.2	5.0	3.6
7. Medical	A	36.7	35.8	43.5	50.0	65.8	43.1
	B	22	39	44	59	67	46
	C	2.6	1.9	2.1	2.1	2.3	2.1
8. Tax	A	10.0	1.7	1.4	1.7	7.3	2.2
	B	25	46	50	30	67	45
	C	—	—	0.1	—	0.2	0.1
9. Power/Fuel	A	56.7	91.4	94.4	97.4	97.6	92.7
	B	41	53	67	81	94	66
	C	7.6	6.7	6.9	5.7	4.8	6.4
10. Loan	A	23.3	12.1	11.8	11.0	19.5	12.6
	B	32	94	107	332	356	148
	C	2.4	1.5	1.4	2.6	3.6	2.0
11. Others	A	53.3	53.9	39.0	31.3	21.9	41.9
	B	64	142	144	282	498	165
	C	10.9	10.5	6.1	6.4	5.6	7.2

NOTE: 1. A. Per cent of households in the income group that incurred the expenditure.
 B. Average expenditure in Rs. per household that incurred the expenditure.
 C. Per cent of household budget of all households in the income group.
 2. Includes payments other than tax to government staff, which respondents consider similar to a tax payment.

poverty among urban poor is their saving behaviour, particularly the saving rate and composition of savings. Table 5 presents some evidence on these aspects of the economic conditions.

While 262 respondents (33.7 per cent of sample) had a monthly

TABLE 3 LUMPY EXPENDITURES AND ASSETS HOLDINGS OF URBAN POOR IN INFORMAL SETTLEMENTS

	Income Groups (Rs. per month)								
	I			II			III		
	(Upto Rs. 350)			(Rs. 351 to Rs. 700)			(Rs. 601 to Rs. 1000)		
	A	B	C	A	B	C	A	B	C*
1. Lumpy Expenditures† (last 5 years)	10	33.3	1700	77	33.2	4857	124	34.6	8855
2. Assets (Conventional)‡	20	66.7	12350	115	49.6	29252	201	56.5	44582
3. Assets (Non-conventional)+	19	63.3	3526	226	97.4	3823	334	93.8	6865

NOTE * A Number of Households

B A as per cent of total in the income group in SDS sample

C Average amount in Rs. per households included under A

† Includes medical treatment and marriage for income group I, and these two heads as also travel, land, house and social/religious ceremonies for income groups II and III

‡ Includes agricultural land, property, jewellery, LIC Policy, PO Saving, others.

+ Includes livestock, agricultural and household equipments, employment tools and vehicles.

income of less than Rs. 600 or an annual income of less than Rs. 7,200 only 140 (18.0% of sample) had an annual saving of less than Rs. 200 and another 34 respondents (4.4%) saved annually between Rs. 201 and Rs. 500. While we might assume that all households having a monthly income of less than Rs. 350, save less than Rs. 200 per annum, at least 88 households having a monthly income up to Rs. 600 (annual income up to Rs. 7,200) save, on the average, more than Rs. 500. Assuming that they save, on the average, Rs. 600 per year, and further assuming they have average annual income of Rs. 6,000, the saving rate works out to be as high as 10 per cent.

Taking the total sample of 777 households, the average monthly saving is Rs. 133 or Rs. 1,600 per year, which in terms of the average annual income of Rs. 13,320 gives a saving rate of 12.0 per cent. Townwise data on average monthly savings are presented in Table 5.

The SDS data clearly indicate that even in the midst of urban poverty, there are pockets of positive savings. Unfortunately, the larger parts of these savings failed to be captured by the organised financial and saving system, mainly because this system has not really catered to assess and develop the saving capacity and saving needs of the urban poor by structuring specific saving instruments and saving collection and servicing delivery systems.

TABLE 4 FINANCING OF ASSETS AND LUMPY EXPENDITURES BY URBAN INFORMAL SECTOR HOUSEHOLDS

(Per cent)

		<i>Savings</i>	<i>Asset Sale</i>	<i>Bank/ PF Loan</i>	<i>Relative</i>	<i>Income</i>	<i>Others</i>	<i>Total</i>
Delhi	LE	67.3	—	3.5	11.4	14.9	2.9	100.0
	A	19.8	—	4.4	0.3	24.6	50.9	100.0
Madras	LE	47.1	9.4	28.3	14.1	—	1.1	100.0
	A	11.9	0.3	6.2	4.1	12.5	65.0	100.0
Bangalore	LE	42.6	57.4	—	—	—	—	100.0
	A	10.5	0.8	2.3	0.3	16.3	69.8	100.0
Kanpur	LE	80.7	3.5	1.7	14.1	—	—	100.0
	A	22.1	0.7	2.0	—	24.3	50.9	100.0
Nagpur	LE	72.9	0.8	—	—	4.3	22.0	100.0
	A	22.6	—	11.9	—	28.5	37.0	100.0
Jaipur	LE	76.1	—	20.2	—	3.7	—	100.0
	A	38.3	—	—	—	37.6	24.1	100.0
Patna	LE	55.7	10.3	2.6	28.9	0.4	2.1	100.0
	A	16.4	—	—	0.4	4.4	78.8	100.0
Gwalior	LE	100.0	—	—	—	—	—	100.0
	A	14.8	—	3.2	—	33.2	48.8	100.0
Trivandrum	LE	96.6	—	—	—	3.4	—	100.0
	A	11.2	0.5	—	—	27.5	60.8	100.0
Ghaziabad	LE	46.1	6.0	—	15.6	26.3	6.0	100.0
	A	9.0	—	—	0.1	30.8	60.1	100.0
Bhubaneshwar	LE	—	—	—	—	—	—	—
	A	56.2	—	—	—	33.3	10.5	100.0
Sonepat	LE	93.4	—	3.7	2.2	—	0.7	100.0
	A	45.9	—	—	—	35.3	18.8	100.0
Srirampur	LE	10.7	—	14.7	21.6	26.5	26.5	100.0
	A	14.8	—	—	—	26.1	59.1	100.0
TOTAL	LE	65.0	3.4	7.0	11.4	9.0	4.2	100.0
	A	18.0	0.3	2.1	0.5	24.3	54.8	100.0

NOTES: 1. LE—Lumpy Expenditures

2. A --Assets

3. Others—largely includes inheritance and gifts received at time of marriage.

Recent estimates of the SDS show that 16.0 per cent of national savings are in the urban informal sector, 51.0 per cent in the urban formal sector and 33.0 per cent in the rural sector. The SDS estimates of national savings, as presented in Table 6, are Rs. 23,427 crore which are about 22 per cent higher than the CSO estimates of household financial savings of Rs. 19,125 crore, as per its New Series. This variation is primarily due to the possibility that the organised sector financial saving institutions fail to adequately cover the savings of the households that save outside the formal sector saving mechanism.

TABLE 5 SAVING BEHAVIOUR OF HOUSEHOLDS IN INFORMAL HUMAN SETTLEMENTS

	<i>Number</i>	<i>Per cent</i>
<i>I. Amount of Saving</i>		
(Rs. per annum)		
(a) Less than 200	140	18.0
(b) 201—500	34	4.4
(c) 501—1,000	158	20.3
(d) 1,001—2,500	307	39.5
(e) 2,501—4,000	72	9.3
(f) Above 4,000	66	8.5
Total	777	100.0
<i>II. Amount of Monthly Saving</i>		
	<i>Rs.</i>	
(a) Delhi	93	
(b) Madras	107	
(c) Bangalore	164	
(d) Kanpur	154	
(e) Nagpur	120	
(f) Jaipur	102	
(g) Patna	66	
(h) Gwalior	45	
(i) Trivandrum	287	
(j) Ghaziabad	107	
(k) Bhubaneshwar	223	
(l) Sonapat	125	
(m) Srirampur	244	
All India	133	

SAVINGS BEHAVIOUR AND PLANS OF INFORMAL SECTOR HOUSE-HOLDS

The desire to save exists in all households but due to low level of income, some may not expect to save. In the SDS study, more than two-third of the surveyed households intent to save, over and above what they already save, with a home loan institution. The saving plans of these households are presented in Table 7.

It is important to note that more than one-third of the households who intend to save, have a long term saving programme, extending over 10 years, mainly because they realise very well that small savings will require a long saving period to accumulate a reasonably good amount. Also, rate of interest on the savings is not a major consideration and more than one-half would be satisfied with less than five per cent rate of interest. The major consideration to save is to obtain a home loan in the near future.

TABLE 6 SDS ESTIMATES OF HOUSEHOLD SAVINGS

Households	Saving	
	Amount (Rs. crore)	Per cent
1. Urban Formal	11,844	50.6
2. Urban Informal	3,852	16.4
3. Rural	7,731	33.0
TOTAL	23,427	100.0

TABLE 7 PROPOSED SAVING PLANS OF INFORMAL SECTOR
HOUSEHOLDS WITH HOME LOAN INSTITUTION

	Informal Sector	
	Number	Per cent
1. <i>Intention</i> ¹		
(a) To save	526	67.7
(b) Not to save	251	32.3
2. <i>Monthly Amount (Rs.)</i>		
(a) Up to 1,000	505	96.1
(b) 1,001—2,500	19	3.6
(c) 2,501—5,000	2	0.3
(d) 5,001—7,500	—	—
3. <i>Period (years)</i>		
(a) Less than 5	241	45.8
(b) 5—10	96	18.3
(c) 10—15	103	19.6
(d) Above 15	86	16.3
4. <i>Expected Interest (%)</i>		
(a) Up to 5.0	281	53.4
(b) 5.1—8.0	102	19.3
(c) 8.1—10.0	77	14.6
(d) 10.1—12.0	19	3.6
(e) 12.1—15.0	7	1.4
(f) Above 15.0	40	7.7
TOTAL (for groups 2,3,4)	526	100.0

NOTES: 1. Intention to save or not to save with a housing finance institution.

2. Total of item 1 (Intention) is same as of total sample, namely 777.

3. The total of items 2, 3 and 4 relate only to respondents who have an intention to save (item 1a)

The above analysis needs to be made at disaggregated level to income groups in the less than Rs. 350 and even lower categories. Nevertheless, the data bring out the awareness to save and this itself is another "sign of hope" for the future.

POLICY ISSUES

Research and Data Base

This article has raised some doubts on the income measure of urban poverty and has suggested some identified financial parameters that need to be considered in measuring urban poverty. It also makes a distinction between abject poverty and what constitutes poverty in terms of any specific income level. More important, the article brings out a need to develop a more extensive data base on the identified parameter of the economic conditions of the urban poor at sufficiently disaggregated levels in terms of income groups. Thus, for example, it is desirable to have data and information on the household budget, asset holdings, lumpy expenditure, financing of lumpy expenditure, saving behaviour and saving plans of the following income category households:

1. Monthly income up to Rs. 150;
2. Monthly income between Rs. 150-Rs. 250;
3. Monthly income between Rs. 251-Rs. 350; and
4. Monthly income between Rs. 351-Rs. 500.

The data for these income groups should be developed separately for small and medium towns, large towns and metros. Data should also be developed on the seasonal fluctuation in monthly income and identify the economic reasons for observed fluctuations. Information on major job category and skill level and skill needs as well as future plans and ambitions of the urban poor need to be built up.

The Ministry of Urban Development and the Ministry of Labour, Government of India, have jointly initiated the setting up of an Informal Sector Centre for Research, Information, Policy and Training (INSCRIPT), with the help of some other Ministries and financial and research institutions. This Centre, which has been established in SDS will, among other things, develop a data base on all aspects of activities in the informal sector settlements and economic activities, both rural and urban. One more segment of the informal sector on which data will be developed is the urban and rural poor. INSCRIPT will function as a nodal agency to also promote the generation of primary data through a network of identified researchers and research institutions in different parts of the country. In this endeavour, it will be mutually beneficial if researchers and research institutions interact with INSCRIPT to

exchange information and results of research studies on the informal sector.

Anti-poverty Strategy

A two-phase strategy may have to be formulated to tackle the problem of urban poverty. In the first phase, it would be best to direct attention to those pockets of poverty where low cost solutions are possible within a short time. This would include that segment of the urban poor, who may be poor in terms of absolute level of income, but in terms of other economic parameters, they may not be considered to be poor. The uplifting of this segment of the urban poor will involve limited financial resources and more of support measures by the government, as a facilitator of economic activities. Basically some additional investment but more restructuring of the existing resource flows and programmes, which improve infrastructure facilities, provides access to institutional credit, promotes skill upgradation, gives shelter support especially in the form of land, are some of the work programmes that could be easily implemented by the government.

For the other segment of urban poor, the 'real' urban poor, a long-term development strategy will be required. These people not only have low level of absolute incomes but have no assets or capacity to meet any exigencies at present or are likely to have in the future. In their case, special anti-poverty programmes, with a high input of subsidy, apart from the support measures to be given to the better off among the urban poor, will be required. □

Social Aspect of Urban Poverty

R.N. THAKUR

OF ALL the social problems that un hinge the minds of social scientists, planners, policy makers and administrators in developing countries especially India, the problem of poverty is crucially staggering. It affects the large masses in both rural and urban settings.

Social scientists since the time of Henri de Saint-Simon have universally accepted the idea that "men should wholly dedicate themselves to the task of improving the lot of the poor". Poverty must be banished lock, stock and barrel. Hence, the poverty question is required to be looked at from all angles—social, economic, political, environmental, scientific-technological, community awareness and participation, and above everything, humanitarian.

This article seeks to analyse the social aspect of poverty in the urban setting in India. It addresses itself, mainly to explore the following questions: who these urban poor are? where these urban poor live? what these urban poor do? what culture they acquire and transmit? what values they imbibe? whether these urban poor suffer relative deprivation in terms of income, unequal distribution of resources, access to public services and opportunities to grow and develop as full social being? Whether urban poverty or poverty, as such, can be removed by redistribution of resources, by having social organisation more egalitarian in character, by maximising network of welfare services, by restricting private ownership and control of resources, or by creating community participation and goodwill based upon interdependence, self-help, and willing cooperation.

Thus far poverty has been examined in mainly economic terms, such as per capita income, or calorie intake criterion. The social aspect of poverty, particularly, the culture and value aspects which poverty creates, breeds and transmits, and which have larger implications for the overall quality of life, have not been seriously examined. This article intends to fill in this gap largely persisting in social science analysis of poverty.

While attempting to go into the sociological aspect of urban poverty, it seems equally necessary to examine the causes and nature of urban

poverty, no doubt that they vary from country to country, from situation to situation, from rural to urban, from metropolitan to Class I cities and to small towns. But, all the same, the poverty remains in the most staggering form.

THE PROFILE OF URBAN POVERTY: SIZE, NATURE AND CAUSES

Cities and towns generally show the following characteristics:

1. very fast rate of population growth due to rural-urban migration for lack of adequate job opportunities in rural areas and small towns;
2. rapid increase in the scale of urban poverty and deprivation;
3. increasingly deficient infrastructure and services, e.g., housing facility, water supply, sanitation, education, health, etc.;
4. growing shortage of productive jobs;
5. chronic shortage of financial, managerial and technical resources; and
6. growing gap between the rich and the poor, between the urban elite and poverty stricken mass of the rural and urban poor.¹

This is a picture of the city that reflects an image of poverty and deprivation in both developed and developing nations of the world.

Historically, during the past century, poverty in India had a correlation with the structure of capitalism in Britain. According to Naoroji, India's poverty was mainly caused by the colonial drain of her wealth to England, recurrent famine and pestilence.² Charles Booth in his study of Poverty in London found that about 32 per cent of the population were living in abject poverty at the turn of the nineteenth century. Seebohm Rowntree observed that in the town of York about 30 per cent of the population was found to be living in poverty.

Yet, India was, perhaps, the poorest country in the world. The abject poverty of Indian masses which Naoroji had highlighted, and acute

¹Overseas Development Paper No. 19, *Urban Poverty*, Report by the Ministry of Overseas Development Study Group, London, p.7.

²Dadabhai Naoroji, *Poverty and British Rule in India*, London, Swan Sonnenschein, 1901, p.2.

- (i) Charles Booth, *On the City: Physical Pattern and Social Structure*, Chicago, University of Chicago Press, 1967, p. 182. Booth collected his data during 1887-1892.
- (ii) B. Seebohm Rowntree, *Poverty: A Study of Town Life*, London, Thomas Nelson, 1902? Rowntree collected his data in 1889.
- (iii) J. Bandyopadhyaya, *The Poverty of Nations*, New Delhi, Allied Publishers, 1988, p.7.

urban poverty in England as depicted by Booth and Rowntree, in more or less the same period of history, are viewed by some scholars as being closely connected with the structure of British capitalism.

The Size of Poverty

In 1978 the Seventh Finance Commission concluded that 52 per cent of the people of India lived below the poverty line.³

The Task Force of the Planning Commission found that at 1979-80 prices nearly 50 per cent of the population of India had been living continuously over a long period below the poverty line.⁴

A World Bank Study (1986) found that nearly four-fifths of the undernourished lived in countries with very low average income.⁵

India's poverty would appear to be much deeper, and a larger percentage of the Indian population than estimated by the Planning Commission (1981) would be found to be living below the poverty line, if the FAO and WHO estimate of minimum calorie requirement, is taken as the basis of calculations.⁶

A remarkable feature of mass poverty in the least developed countries that such poverty is thick in the rural sector. Even the urban poverty is a function of the rural poverty being caused by the displacement of a part of the rural labour force.

The social scientists have viewed the size, nature and causes of poverty in various forms.

The well-known Swedish Social Scientist Gunnar Myrdal lists as hereunder the attitudes towards life and work in the Southeast Asia which, according to him, are detrimental to the economic development:

1. low level of discipline, punctuality and orderliness at work;
2. irrational outlook and superstitious beliefs;
3. lack of ambition, alertness, adaptability and readiness for experimentation and change;
4. contempt for manual work;
5. submissiveness to authority and exploitation;
6. low attitude for cooperative effort;
7. low standards of personal hygiene; and
8. negative attitude to deliberate and sustained birth control.⁷

³Report of the Finance Commission, Government of India, 1978.

⁴Government of India, Planning Commission, *Sixth Five-year Plan, 1980-85*, New Delhi, Government of India Press, 1981, p. 51.

⁵World Bank, *Poverty and Hunger: Issues and Options for Food Security in Developing Countries*, Washington, DC, 1986, pp. 1-3.

⁶The per capita daily calorie consumption considered necessary for bare subsistence by the Planning Commission is much below the level assumed to be the necessary minimum by the FAO and the WHO.

⁷Gunnar Myrdal, *Asian Drama*, Vol. I, Chapter 3, and Vol. III, London, The Penguin Press, 1968, p. 1962.

Myrdal also identifies the following institutional conditions as being unfavourable to the economic development in Southern Asia:

1. a land tenure system detrimental to agricultural advance;
2. undeveloped institutions for enterprise, employment, trade and credit;
3. imperfections in the authority of government agencies;
4. instability and low effectiveness in national politics;
5. low standards of efficiency and integrity in public administration;
6. ineffective organs for provincial and local self-government; and
7. a weak infrastructure of voluntary organisations.⁸

Urban Nature of Poverty

There is general agreement with the views held by Tarlok Singh and others that "the greater part of India's poverty is rural, but urban and rural poverty are intimately connected."⁹ The problem of rural poverty "...is flowing into the urban areas."¹⁰ The large cities are growing in the number of poor people.¹¹ The urban growth is a result of "population shift from the poverty-stricken hinterland to the cities."¹²

"The vast majority of urban workers come from villages and continue to have their roots there." The poorest among them come from the most helpless strata of the rural population. The growing landlessness, the perennial drought and flood conditions, low productivity of soil, all kinds of socio-economic vagaries of rural life, are some of the major reasons for growth and spread of pavement dwellings in metropolitan cities like Calcutta. Again, in times of difficulty or unemployment, urban workers are often able to fall back on the traditional sources of income available in their villages. There could be no doubt that "if this rural connection did not exist, the conditions of life of the urban poor would be worse than they are".¹³

Social Construction of Urban Poverty

There are various estimates of population below the poverty line in

⁸Gunnar Myrdal, *Asian Drama*, Vol. II, London, The Penguin Press, 1968, Chapter 18.

⁹Tarlok Singh, *Poverty and Social Change with a Reappraisal*. (2nd edition), New Delhi, Orient Longmans, 1969, p. 17.

¹⁰V.M. Dandekar and N. Rath, *Poverty in India*, Bombay, Indian School of Political Economy, 1971.

¹¹P.B. Desai, "Economy of Indian Cities," *Indian Journal of Public Administration*, Vol. XIV, No. 3, July-September 1968, p. 453.

¹²H.D. Kopardekar, *Social Aspects of Urban Development*, Bombay, Popular Prakashan, 1986, p. 10.

¹³Tarlok Singh, *op. cit.*, p. 17.

the urban area. In the present situation, a total of 27.7 per cent of the urban population is below the poverty line as mentioned only recently by the Minister of State for urban development in the Lok Sabha.¹⁴ Earlier, on all-India basis the percentage of urban population below poverty line was estimated to be at 38.2 in 1977-78, and 28.1 in 1983. According to the National Building Organization estimates, in 1981 nearly 19 per cent of India's urban population resided in the slums. According to the Town and Country Planning Organisation, almost 28 per cent of the urban population of the selected states (11) were residing in the slums. According to the Planning Commission (Task Force) estimates, the slum population constituted about 20 to 25 per cent of the total urban population.¹⁵ These slum populations substantially or wholly constituted the urban poor.

Whatever may be the numerical estimates about the population of these urban poor and whatever may be the criteria about determining their poverty—whether per capita income or household income, or calorie intake, it will be of concern to all to know who constitute this sizeable percentage of urban population. Who are these urban poor?

The social construction of these urban poor is based on some select research studies conducted in some metropolitan cities and medium-sized cities in India.¹⁶ After all, who are these urban poor?

Problems of urban poor are all too obvious in the developing countries of the world.

Whether the average families of urban poor are bigger; whether the larger size of family is associated with greater number of children; whether the dependency ratio on the urban poor is higher; whether women show a higher participation rate in the lower income brackets, whether their level of nutrition is low in terms of protein and calorie intake; whether the level of literacy is low; whether they live in slum and squatter settlements or on pavements—are questions which touch upon the social characteristics of urban poor.

A vast majority of them are migrants, rural poor, landless labourers, and petty farmers. Acute impoverishment of these small farmers, near-hunger situation of rural landless labourers, lead to their 'distress' migration to cities.¹⁷

¹⁴*Times of India*, March 30, 1989, p.11.

¹⁵Planning Commission, *Task Force in Housing and Urban Development*, IV, 1983, p. 38.

¹⁶Most of the research studies on slums and squatters are confined to metropolitan cities like Bombay, Calcutta, Delhi, Madras, Hyderabad; only a few medium sized cities have been studied such as, Vijayawada (A.P.), Gulbarga (Karnataka), Patna, (Bihar), Alleppey (Kerala), Kanpur (U.P.), Chandigarh, Ahmedabad (Gujarat), Poona (Maharashtra), etc.

¹⁷S.S. Jha, *Structure of Urban Poverty*, Bombay, Popular Prakashan, 1986, p. xii.

These migrants¹⁸ (urban poor) come to the city with little or no saving. They have much fewer opportunities for regular wage-earning, and hence, they occupy the lowest rung of the urban society.

These urban poor perform jobs but are generally menial, low skilled, unskilled, or semi-skilled.

These urban poor belonging to the low income groups,¹⁹ live in perpetual debt because they face chronic shortage of money. They also suffer from a lack of nutritious food. In a research study conducted in Alleppey in Kerala among the Kudumbis working as household servants, it was found that these poor Kudumbis fell into debt for the reason of purchasing their daily food, and medicines, reconstruction of houses, marriages, cremation and such other purposes basic to their survival.²⁰

These poor belong to all castes, ethnic, religious and linguistic groups. Poverty is independent of religion and language with only difference that some locality is dominated by the members of one religious group or the other; generally the Hindus predominate.

¹⁸Also see, Delhi Development Authority, "Dimension of Squatters' Settlements in a Super Metropolitan City—Delhi", New Delhi, December 1983 (mimeo); Delhi Development Authority, "Census of Squatters: Clusters in Trans-yamuna Area", *Report of the Socio-Economic Wing of City Planning*, New Delhi, 1986 (mimeo), p. 34.

According to the Report of DDA, an estimated 2,00,000 migrants come into Delhi annually and a large percentage of them join the jhuggi-jhonpri clusters.

¹⁹S.S. Jha, op. cit, pp. 13-16. Also see, S. Sinha, *Slum Eradication, and Urban Renewal*, New Delhi, Inter India Publications, 1985.

K.R. Rao and M.S.A. Rao, *Cities and Slums: A Study of Squatters' Settlements in the City of Vijayawada*, New Delhi, Concept, 1984, pp. 65-66;

(a) According to the Census of the Slums in 1976 in Bombay, conducted by the State Government of Maharashtra, income figures are as under:

- (i) average income per month per household Rs. 419.00.
- (ii) average income per month per parson Rs. 94.00.
- (iii) average income per month per worker—Rs. 285.00.
- (iv) average rent paid per month per household Rs. 15.02.

(b) A Survey conducted in 1979 in four major slums of Bombay viz., (a) Bharat Nagar of Bandra, (b) Golibar Colony, (c) Hanuman Tekdi, and (d) Maya Nagar of Worli, revealed that 66 per cent households (surveyed) had household income per month—less than Rs. 500, and 33 per cent households had income (per month) of Rs. 501 and above.

(c) R.N. Thakur and M.S. Dhadave in their study of slums in Gulbarga found that the per capita income of slum dwellers was very low; there was lack of assured and regular income; there were a large number of dependents in family on earning members (slum and social system, pp. 90-91).

²⁰L.S. Sandbergen, *Poverty and Survival: Kudumbi Female Domestic Servants in Alleppey (Kerala)*, New Delhi, Manohar Publications, 1988, pp. 26,27 and 31.

By and large, the larger proportions of these urban poor come from scheduled castes and backward communities.²¹

Urban poverty may be independent of religion but is not independent of caste group. Those who are low, lower and lowest in the caste hierarchy are generally the poor in the urban society.

Where do These Urban Poor Live?

These urban poor live in slums, on pavements, on the railway platforms, under flyovers, and bridges. They encroach upon government lands, and vacant private lands or spaces. They construct dwellings which reflect deprivation, squalor, and degradation in their daily lives.

The state has not been able to house these urban poor, or has been able, at best, to give shelter to a limited number of them. The private builders build with a profit motive and not to provide house to the poor and needy. The irony of situation is that those who work and sweat to construct buildings for others do not themselves have roof overhead.

They live in congestion, overcrowding, with little or no facilities of toilets, baths, drinking water, sanitation, drainage, sewerage and electricity. Only in Delhi and some other metropolitan cities, several slums have been provided with toilets, drinking water and electricity. In some cities, many of the poor are born on pavements and destined to die on pavements.

They live in hutments with roofs of tiles, asbestos sheets, or thatch, or flammable material, such as, plastic sheets, etc.

The city provides a market for their cheap labour and they cling to the city developing a culture of survival.²²

They live in the slums which are described as 'Jhuggi-Jhonpri' and 'Katra' in Delhi; 'Bastee' in Calcutta; 'Cheri and Chawl' in Bombay; 'Gandi Bastee' in other cities and towns.

Katras are small single rooms normally constructed in a row with the doors and windows in a dilapidated condition constructed with unbaked bricks and plasters peeled off. Bustees are generally thick clusters of small, dilapidated and thatched huts. Unbaked bricks, rough stones, mud and bamboos, wooden pieces, plastic sheets, grass and palm leaves are used in the construction of these huts. These huts which are constructed close upon one another cannot withstand rains and always

²¹In his study of the four slums in Bombay, S.S. Jha (1986) found that 43.8 per cent belonged to Scheduled Castes, 18 per cent to backward communities, 4 per cent to Scheduled Tribes, and 33 per cent to other castes. Also see, (i) Shekhar Mukherjee, *Poverty and Mobility in India: A Field Theoretic Perspective*, Calcutta, Prajna, 1982, p. 115; (ii) R.N. Thakur and M.S. Dhadave, *Slum and Social System*, New Delhi, Archives Publishers, 1987, pp. 69-71.

²²Colin Gonsalves, *City Under Siege*, Bombay, ISRE, 1981.

stand threat of fire.²³

The insanitary conditions prevailing in the slums where these urban poor live render them to fall prey to diseases and illness of various kinds. The areas are overcrowded and insanitary. The children and women use open drains as latrines even if public latrines are provided. Insanitary conditions help spread diseases. Their most common health problems are: diarrhoea, dysentery, jaundice, cholera, worm infections, typhoid, tuberculosis, respiratory diseases, polio and viral infections. Women and children are more vulnerable to these as they have low immunity owing to under-nourishment.²⁴ Poor sanitation conditions in these slums continue to create favourable conditions for disease transmission and health hazards for not only the poor living in the slums but the entire urban population.²⁵

The micro-environments in these hutments and slums are such that majority of them live in one room. Seventy per cent of these household in Calcutta, and 82 per cent of them in Bombay live in just one room. Population density is at least five to seven persons per room of an average size of 10 to 12 feet in most of the metropolitan and medium sized cities.²⁶

It may not be always correct to hold that all those who live in slums are poor, but it is fairly correct that in some of the cities more than 50 per cent of the city's population live in slums and on pavements; and those who live in the crumbling chawls, jhuggies, bustees and jhopadpathis, are the people who have to suffer the most. They live in degrading, subhuman conditions; under constant threat of attack from the civic and governmental authorities. They always live in a dreaded fear that some day they can be uprooted from their existing settlements, and thrown out as and when the public authorities want it. The examples are there of such ruthlessly executed demolition of thousand of hutments spread between the Jama Masjid and Turkman Gate in Delhi, and "gun-point eviction of seventy thousand hutment dwellers residing in a slum complex in Bombay."²⁷

What Do These Urban Poor Do?

The migrants to the city do come in search of jobs, in the hope of

²³R.N. Thakur and M.S. Dhadave, *op. cit.*, p. 45.

²⁴UNICEF, *Position Paper—Urban Development*, New Delhi, 1984 (mimeo); Also see, A.M. Singh, "Women and the Family: Coping with Poverty in Bastis of Delhi" in A. de Souza (ed.), *The Indian City*, 1978, p. 86. L.S. Sadbergen, *op. cit.*, p. 31. S.D. Raj and M.A. Slingby, *Case Study of Housing and Health of Vyasaripadi Task Slum Improvement Programme*, Madras, October 1986 (mimeo).

²⁵*Seventh Five Year Plan 1985-90*, Vol. 2, Planning Commission, New Delhi, p. 274.

²⁶P.K. Nambiar, "Slums of Madras City" in A.R. Desai and S.D. Pillai (eds.), *Slum and Urbanisation*, Bombay, Popular Prakashan, p. 180.

²⁷S.S. Jha, *op. cit.*, pp. xi-xii.

new opportunities and better standard of living, and more economic prospects to help them subsist, and help their families many of which are still in their villages and small towns.

What do they do to achieve their immediate goal and fulfil their aspirations?

They take up jobs generally menial,²⁸ low skilled or unskilled. They work as sweeper and scavenger, vendor, peon, watchman, petty businessman, hawker, thelawala; young boys work in small hotels, canteens, and way-side 'dhabas' as cleaner and waiter.

Poor muslims do jobs in slaughter house, petty trade, as unskilled labourers in unorganised sector.

These are urban poor, the slum dwellers and pavement dwellers whose services are needed by the city. They constitute the work force of the city, a working class which appears separated from the organised industrial working class. These urban poor are employed in varieties of jobs, both unskilled and semiskilled; some are illiterate some literate.

These jobs may be listed as the following types:

A. Unskilled worker: (i) manual labour, (ii) watchman, peon, (iii) domestic servant, maid servant, (iv) sweeper, (v) washermen, (vi) black marketeer, selling illicit liquor, (vii) petty shopkeeper, vendor, vegetable seller, hawker, rag collector, (viii) unskilled textile worker, rickshaw puller, cart puller, (ix) construction worker, (x) shoe-maker and shoeshiner, and (xi) gardener.

B. Beggar and mendicant.

C. Semi-skilled, skilled and technical worker²⁹: (i) carpenter, (ii) plumber, (iii) embroidery worker, (iv) welder, (v) mason, (vi) salesman, (vii) petty contractor, (viii) fitter, (ix) turner, (x) goldsmith, and (xi) tailor.

These poor slum dwellers of the city carry a stereotyped image as lazy, sloth, inferior, degraded, unintelligent, resigned to fate, lacking in motivation, having low aspiration, living in a 'culture of poverty', such view of contempt and dismissal is a jaundiced view.

From a closer and more objective observation one can have a true image which is much different—an image which shows their readiness to change and adjust, take up challenge, 'strive and struggle' against a generally hostile city environment. An understanding of the way these urban poor, the slum dwellers struggle against the odds to eke out their livelihood in their everyday life would dispel such a view.

²⁸S.S. Jha, *op. cit.*, p. 63

²⁹"Dimensions of Urban Poverty", National Institute of Urban Affairs, Research Study Series No. 25 (mimeo), p. 52, 53. R.N. Thakur and M.S. Dhadave, *op. cit.*, p. 72. According to the study most of the urban poor living in the slums are unskilled or casual workers.

What Culture they Acquire and Transmit, and What Values they Imbibe?

According to David R. Hunter, slum is the 'locus of poverty' and poverty is one of the potent forces that maintain the "vicious circle and make it difficult for people to break out."³⁰

In his study of the slums of Mexico city, Oscar Lewis mentioned that the slums have their own unique culture of poverty having their own characteristics which he considers as factors inhibiting integration of slums into the larger urban community.

According to Lewis, the following are the characteristics of the culture of poverty:

1. Lack of effective participation and integration of the poor with the major institutions of the larger society.
2. Low wages, chronic unemployment and under-employment leading to low income,... absence of saving, absence of food reserves in the home and a chronic shortage of cash.
3. Low level of literacy and education, no membership of labour union or any political party, no participation in the national welfare programme, make very little use of banks, etc., critical attitude towards some basic institutions of the dominant classes.
4. Minimum of organisation beyond the level of the nuclear and extended family.
5. Community spirit in the slums and the slum neighbourhood.
6. On the family level, the absence of childhood as a specially protected stage in the life cycle. Early initiation into sex, a relatively high incidence of abandonment of wives and children.
7. On the level of individual, strong feeling of marginality, of helplessness, of dependence, and of inferiority.
8. high incidence of material deprivation, little ability to plan for the future, sense of resignation and fatalism.

These characteristics of attitude, culture and values are generally to be found in the slums of the west. Some of these traits of culture of poverty are also to be found in the slums in Indian cities. However, the family life among the urban poor living in the slums in Indian cities is characterised by stable relations between husband and wife, except a few incidence of divorce, or abandonment of wives and children. But, as far as other traits of culture of poverty, such as lack of effective participation and integration of the poor into the major institutions of the rest of the community, low wages, unemployment, under-employment, segregation, discrimination, poor housing conditions, strong feel-

³⁰David R. Hunter, *The Slums—Challenge and Response*, New York, Free Press, 1964, pp. 30-31.

ing of marginality, low level of aspiration are concerned, they are also to be found among the urban poor living in the slums in our cities.

There is one striking point about the urban poor in the Indian slums that they do not show much normlessness at the level of the family. They may suffer poverty and unemployment, but yet they have their own distinct culture. The cultural practices of these poor living in slums are a clear indication of the normative life of the slum dwellers. They also imbibe and practise the values of the upper or middle strata in the city. In addition, they also develop certain alternative values to adjust themselves with their deprived circumstances.

The housing conditions of the poor are very bad. Their deteriorated physical conditions degrade the slum dwellers socially and mentally, and alienate them from the wider community.

Families of nuclear type predominate but the average size of the family is not small; each family consists of five to seven children.

The attitudes of orthodox members of the upper castes who constitute sizeable population in the city are a source of isolation to the urban poor most of whom come from the lower caste groups. G.S. Ghurye, speaking of lower classes and problem of their assimilation in the Hindu society, writes that the orthodox members of the other sections who form the bulk, look upon them with dislike and contempt, and regard them as incapable of a more healthy and moral life. They spurn to have any dealings with them which savour of anything like social intercourse.

Lewis also identified seventy-two interrelated socio-economic and psychological traits of the culture of poverty, broadly grouped under four categories:

1. relationship between the sub culture and the larger society;
2. the nature of the slum community;
3. the attitudes, values and character structure of the individual; and
4. lack of effective participation and integration of the poor in the major institutions of the larger society can cause alienation leading to the development of a sub-culture of poverty.³¹

All the same, Lewis also observed that the lower castes in India though they may live in dire poverty, may not have a sub-culture of poverty because they are integrated into the larger society through their social organisation, such as, caste.

Yet the manner in which the slums and squatter settlements have mushroomed, and the increasing number of pavement dwellers in metropolitan cities indicate that the living conditions for the urban poor are

³¹Madras Institute of Development Studies, *Poverty: An Interdisciplinary Approach*, Madras, Somaiya, 1982.

distinctly approximating those described by Lewis for the emergence of the culture of poverty. Lewis warned that if this happened, then it would definitely be much more difficult to eliminate the culture of poverty, even though it might not be much difficult to eliminate poverty.

Once culture of poverty comes into existence it tends to perpetuate itself from generation to generation because of its effect on the children. By the time slum children are eight or nine years they have usually absorbed the basic values and attitudes of their subculture, and are not psychologically, geared to take full advantage of the changing conditions or increased opportunities which may occur in their life time.³²

Somewhat different is the case with the Indian poor. To illustrate by example, Sandbergen in her study of poor Kudumbi households in Alleppey (Kerala) discovered a distinct social value even in dire poverty. Among the poor Kudumbis, dignity and esteem are given to a household whose women stay at home, although they have to live in extreme poverty and suffer from hunger. Apart from what the men think, women themselves have very clear views about the value they attach to servant's work:

Servant's work is a slavery; poverty compels me to do this kind of slavery. There is other way to reduce our hunger, I hope they will not send my sister to do this dirty job.

Middle Class Value

There is strong relation between poverty and the work outside the house by the women. The poorer the family, the more women work outside as servants. But then, economic urge is only part of the whole process. There are many socio-cultural factors involved in the decision whether a woman will work as a servant, and a very important one is the attitude of the husband towards having a wife working outside the home. It gives status to the family to keep the wife in the house, and in some very poor households they are found to be starving in pride.³³ This sense of dignity and value (of the Indian middle class) is peculiar to the Indian poor, and this is which makes them distinct from the urban poor in the west.

Attitudes and Habits of the Urban Poor

Having lived through a state of perpetual poverty and deprivation, the urban poor generally develop and acquire habits which may be

³²Madras Institute of Development Studies, *op. cit.* p. 50; Also see Oscar Lewis, *The Children of Sanchez*, London, Sackner and Warburg, 1961.

³³L.S. Sandbergen, *op. cit.*, p. 82.

characterised as their typical slum culture and which get transmitted to the children as well.

These habits generally are:

- (i) idle gossiping;
- (ii) backbiting, leg pulling and slandering;
- (iii) gossiping about the affair of the neighbour;
- (iv) quarrel over small matters;
- (v) bearing tales and spreading rumours;
- (vi) use of abusive language in minor incidents and quarrels among children or women;
- (vii) little regard for public property, not much hesitation in breaking streetlight, removing lid cover of pit holes, etc.;
- (viii) mutual jealousy, suspicion;
- (ix) smoking;
- (x) drinking;
- (xi) tobacco taking, spitting in public places;
- (xii) gambling;
- (xiii) playing cards; and
- (xiv) little respect for other's view-points, opinion, comforts and time.

These attitudes and habits get into the model style of behaviour and culture pattern of the urban poor residing in the urban slums in India. It is also to be admitted that in India poverty alone does not explain deviance in behaviour, family and caste have their own role.

Gender Factor

In urban India, the percentage of women workers in unorganised sector increased relatively more than the men workers. In the household industry women workers increased from 9.56 to 11.98 during 1971 and 1981; whereas men workers in household industry increased from 4.38 to 5.46 during the same period. A substantial number of women have been absorbed in the metropolitan work force in informal sector.³⁴ The sex ratio in urban India increased from 845 women per 1000 men in 1961 to 858 women per 1000 men in 1971 and further to 880 women per 1000 men in 1981. "A poverty induced female migration"³⁵ is an important explanatory factor behind this process.

³⁴A. Kundu, "Inequality, Poverty and Urban Growth" in S.M. Alam and F. Ali-khan (eds.), *Poverty in Metropolitan Cities*, New Delhi, Concept, pp. 34 and 41,

³⁵*Ibid.*, p. 41.

EXPLOITATION AND INEQUALITY IN THE SYSTEM: THE WAY OUT

Exploitation and inequality are inherent in our system both rural and urban. Various high estimates of population in slums and squatter settlements also suggest a high incidence of urban poverty and exploitation. According to the survey of 1986 of slums in Delhi, the jhuggi jhonpari clusters on public lands increased from 536 to about 700, one of the reasons behind this is political motivation and the protection of these areas as the vote banks for future elections. This rather helped increase the number of slum formations, and perpetuation of poverty in them.

If a view is taken that poverty exists because opportunities do not exist for urban poor to improve their lot, then one will seek a restructuring of city system in a manner that opportunities are more evenly distributed which the dominant groups will not appreciate because it will amount to threatening their own privileged positions. Among poor Kudumbi households, Sandbergen found that women servants had to work seven days a week. There were no days off with pay or food; even in case of illness or pregnancy there was no pay, no food. There was no pension or other old-age assistance.³⁶ The urban poor as such suffer the same tragic situation although the scheme of old age assistance has been introduced in some parts of the country.

Social scientists find explanations of poverty in various terms, such as, social, economic, environmental and political, and especially with respect to individual behaviour and initiatives. Sociologists explain poverty in terms of social structure which breeds social and economic inequality. The disparity between the rich and the poor seems to be widening. Poverty is also understood as a product of practices which legitimise it, and unless they undergo change poverty is less likely to be banished.

Over the decades, the process of development in the nations of the Third World has gone unabated. The capital intensive industries have been located in major cities, particularly the region of the national capital. The attractions of these cities, together with concomitant development in their rural hinterland have led to a massive flow of population towards these cities. The migrants remain poor.

The urban poverty is presented as a problem the solution of which lies not in the urban poor but in the large and wider society, in the state, and in the relationship with the industrialised nations. The variety of measures taken by the government may be only the variety of palliatives unless they change the structure of society. As in the socialist system, there is need to strike at the roots of both mass poverty and structural exploitation.

³⁶L.S. Sandbergen, *op. cit.*, p. 94.

If we apply the western concept of a culture of poverty only to the poor, the onus for change falls too much on the poor, while in reality, the prime obstacles to the elimination of poverty lie in a socio-economic system that is given to the maintenance and increase of wealth among the already affluent.

A study of the life style of the poor need to give up the notion of culture as largely behavioural, as something intrinsically persistent, with little concern about divergent aspirations. Most poverty studies should deal with behaviour pattern and aspirations on an individual basis, relate them to situational origin, and see how much the behavioural norm related to poverty would persist under changing situation.

The stress has to be on the change in situation. To stop the cityward migration of the poorer section of rural population, to reduce if not completely remove urban poverty, the necessity to improve the socio-economic standard of Indian villages is a precondition.

Launching of projects like small scale enterprises in collaboration with nationalised banks and cooperatives to rehabilitate those among the urban poor willing to acquire special skills as done by the Calcutta Metropolitan Development Authority, may help improve the situation.

Construction of separate night shelters for men and women on public lands in various places, particularly for those squatters living by railway track, station platforms, under fly-over and bridge, with facilities of separate toilets, baths, drinking water and storeroom where they could leave their belongings and beddings, etc., during day-time when they go out to work, will help remove the difficulties of these poor people a great deal. Daily labourers, hawkers, vendors, handcart and rickshaw pullers, maid servants may be provided with such shelter at a low rent of Rs. one to two per day.

The beggar, the old, the disabled, and those suffering from infectious and contagious diseases, who largely constitute the urban poor may be located, kept under care and rehabilitated. In this task, the role of the state, and the voluntary organisations is crucial.

Integrated Community Development Programme of the type operating in Calcutta to ameliorate the socio-economic condition of pavement dwellers in the partnership of a number of philanthropic and social welfare organisations, such as, All India Women's Conference, Ulta-danga Complex, Lutheran World Service, Paikapara Samaj Unnayan Kendra, etc.; Calcutta Metropolitan Development Authority; Bank of Baroda; and the beneficiaries, will help a great deal to improve the conditions of the beneficiaries who are the urban poor. With the involvement of the beneficiaries as partners, and on the basis of self-help, mutual cooperation and support, the improvement in the socio-economic condition and quality of life of the urban poor may not be far to achieve.

Unequal distribution of resources, lack of honest and sincere implementation of programmes for the urban poor, and lack of a well formulated policy in this direction are the major constraints. Even within the existing conditions and resources, urban poverty can be greatly reduced if not removed completely, by having redistribution of resources, by having social organisation more egalitarian in character, by maximising network of welfare services, by restricting private ownership and control of resources particularly urban lands, and by creating community awareness, participation, and goodwill based on interdependence, self-help, mutual support and willing cooperation.

The role, responsibility and sacrifice on the part of the urban elite and sub-elite in achieving this task will be much greater. If the urban elite could overcome their over-acquisitive and exploitative tendency, urban poverty can be greatly mitigated. □

Poverty Jurisprudence and Poverty of Jurisprudence

V.R. KRISHNA IYER

*The law locks up both man and woman who steals the goose
from off the common,
But lets the greater felon loose
Who steals the common from the goose.*

—ANONYMOUS

CAPELLETTI WRITING on the right to justice as the foremost human right, explains:

The right of effective access to justice has emerged with the new social rights. Indeed, it is of paramount importance among these new rights since, clearly, the enjoyment of traditional as well as new social rights presupposes mechanisms for their effective protection. Such protection, moreover, is best assured by a workable remedy within the framework of the judicial system. Effective access to justice can thus be seen as the most basic requirement—the most basic ‘human right’—of a system which purports to guarantee legal rights.

Human Justice is the spiritual essence of civilised legal systems. That is why in our constitutional order, the highest place is assigned in the Preamble to Justice—social, economic and political as the title of every citizen. Thus the rule of law, in the Indian setting, must respond with dynamic realism to the demands of the humble Bharat humanity, especially those whom Tagore described as “the eternal tenants of an extortionate system”. After all, law is for man and fulfils itself only in delivering justice to members of society.

Seton Pollock, way back in 1973, wrote:

The law itself, though of crucial social importance, is only one element in the total human task. That task is to meet and master those frustrations that diminish man in his humanity and obstruct the reali-

sation of his freedom and fulfilment within the human society. Those frustrations stem from ignorance, poverty, pain, disease and conflicts of interest both within the person (the field of psychological medicine) and between persons (the territory of the law). These manifold and interacting frustrations cannot be met by any one discipline but only by a coordinated attack upon the problem through enlightened political and administrative initiatives and by educational, medical, psychological and legal remedies.

Our concern is with the human condition and the imperative need to improve it through such resources as we can develop. We are beginning to see more clearly, the need for a unitary view which is, in essence, spiritual in its character, reaching down to the realities that underlie our fragmented disciplines. The lawyers, the educationalists, the economists, the medical profession, the politicians and the administrators cannot in isolation from one another resolve the problem we face in our growingly complex world. Yet each is needed. Frustrations do not fall neatly into any one category and present us with problems which can often not be solved by any one of these several disciplines. In a preface to a book it was observed that the burning issue of our times is how our resources can be developed and combined to achieve the fulfilment of the human task and the improvement of the human condition.

If the cynosure of a legal system is the human situation, what affects most the life of human beings—their material conditions and spiritual urges, basically their social and economic matrix, human development is bound up with his material conditions. This insight flows from Marxian perceptions of reality and social sciences. Marx puts it nearly:

Law can never be higher than the economic order and the cultural development of society brought to pass by that economic order.

Dialectically speaking, jurisprudence mirrors the governing economic factors of a given society but other cultural elements also influence the system. That is why it may be broadly asserted that economics is the foundation, law is the superstructure. Objectively viewing the Indian legal system, we must adopt the lens of dialectics, shorn of legend and myth, populist rhetoric and irrelevant pieties.

Indian juristic thought notwithstanding the hard fact that enormous layers of have-nots inhabit the Republic, is dominated still by the dubious Austinian positivism moulded for a regal order, not a democratic process. However, our imperial heritage in the field of law dies hard and our socialist verbiage, with all its foams of eloquence, breaks like billows upon the sandy beaches only to be absorbed instantly with no impact

upon the life of the people. The reason is not far to seek. Our judges and jurists who matter are egg-heads, Oxbridge and other, brain-washed on Austin and Salmond at college and allergic to the socialist legal system branded 'red'. Karl Marx has not a dog's chance in Socialist India's court system, recent constitutional rhetoric apart. He is red rag to the judicial bull as the EMS case proved with punishment for contempt.¹ And the voices of the few jurisprudents, who dare or care to read Marx and read into our constitutional text scientific socialism and its jural fall-out, are drowned by hostile dicta refusing to make a radical rupture with traditional legal culture. The truth is that our constitution is pale pink operated by bourgeois robes; the myth is that it is socialistic (with chameleon colours) and judges, with unconscious class bias, read what they wish into it. Sir Ivor Jennings, many decades back, saw the ghosts of the Webbs (Fabian Socialism) stalking Part IV; and since then, the specific mention of 'Socialist' in the Preamble and other indicia of socialism (Art. 43A, 39A), the deliberate deletion of right to property and compensation for taking property [by omissive amendments of Arts. 19(1) and (31)] have crimson-painted the *suprema lex*. Unless the economic order goes crimson the legal order remains carnivorous.

Our Socialist Republic needs a social justice jurisprudence. This imperative is illumined by many precedents which indicate that a Socialist Republic must have a jurisprudence which meets the needs of those who benefit from socialist responses from the law. The pariahs of society are the priority claimants to social justice. I shall illustrate with reference to a ruling of the Supreme Court—the *Nakara* Case—where poor pensioners were the petitioners who sought social justice.

Nakara almost inaugurated a new era by taking the Preamble seriously as a seed of crimson jurisprudence.² The unanimous judgement of a Five Judge Bench applied the concept of socialism as a seminal strand in the law of the land. Prof. Baxi benignly critiques the judgement thus:³ "*Nakara* is probably the first decision of Supreme Court expressing collective judicial exposition of what 'socialism' conveys to the Court, not just as a rhetorical framework but as the core basis for the decision itself..." "The Preamble which is "the flood-light illuminating the path to be pursued by the State"⁴ now expresses the high ideal of socialism. And the "principal aim of socialist State is to eliminate inequality in income and status and standards of life".⁵ The "basic framework of socialism is to provide a decent standard of life to the

¹AIR 1970, SC 2015.

²AIR 1983, SC 130.

³Supreme Court Cases, Part 4, Journal Section, 1983, p. 3.

⁴AIR 1983, SC 130, p. 138.

⁵*Ibid.*

working people and especially economic security from the cradle to the grave".⁶ Justice Desai observes stirringily:

It was such a socialist State which the Preamble directs the centres of power—Legislative, Executive and the Judiciary to set up. From a wholly feudal society to a vibrant throbbing socialist welfare society is a long march but during this long journey to the fulfilment of the goal every State action whenever taken must be directed, and must be so interpreted, as to take society one step towards the goal.⁷

"Socio-economic justice" from now on takes a new colour: the colour of socialism. The new social morality, informing socio-economic justice, expresses "abhorrence for economic exploitation".⁸ Equality in status and income is coupled with an abhorrence for economic exploitation in the Supreme Court's conception of constitutional socialism." After 1976, we are a socialist republic, and the Preamble explicitly tells us so. Whatever may have been the constitutional status of pensionary rights before 1976, they now stem from the Constitution and the new conception of socialism articulated, in it. Unfortunately, for the legalists, Justice Desai takes good care (with his brethren actually signing the judgement without a demur) to make the Preamble 'socialism' the very basis of the operative decision. Art. 14 is violated, His Lordship insists, by the cut-off date because of its arbitrariness; and the arbitrariness arises straight from the judicial acceptance of socialistic goals of the Constitution—economic equality and abhorrence for economic exploitation. The difficulty is that socialism is writ so large in the Constitution and the judgement interpreting it afresh that only official censorship, not private censorship of the legalists, can remove from view socialism as the operative basis of the decision itself. I hail this, unrhethorically, as a magnificent achievement and salute the Court. "...Nakara thus illustrates the pleasures and perils of doing socialistic justice through a Court not all of those Justices fully appreciate the qualitative changes brought about in the constitutional conception of socialism by the Forty-Second Amendment. Step by step, judicial consensus on this conception, not as rhetoric but as an instrument of interpretative power, has to be developed. A virile constitutional conception of socialism has to be thus developed within the bounds of a fragile judicial consensus".

The interpretive artists of socialist jurisprudence can vilify radical values if they wear wig and gown. Justice Desai fills this bill well. The

⁶AIR 1983, SC 130, p. 139.

⁷*Ibid.*

⁸*Ibid.*, p. 142.

social locomotion towards a surer leftist destination is found in the new provisions imported by the 42nd Amendment.

The law subserves the interests of the class which dominates the law-makers. Even when the law wears the mantle of equal justice, it is operated by official engineers in a discriminatory manner. The moneyocracy suffers no mayhem, whatever the radical diction of the law. The weaker sector continues to be the victim sector whatever the verbal prospects the text carries. Illustratively, one may cite the Land Reforms Laws as ineffectual against giant landlords and the Bonded Labour Abolition legislation as hanging limp with no inclination to salvage the sufferers of servitude.

The alleged autonomy of analytical jurisprudence is fashionable but false, indeed dangerous, because it hides the substantive character of social forces and production relations which spawns rules of law and jural theories. It promotes sociological ignorance among lawyers and judges who remain cocooned in legal 'commands' without asking who, why and so on.

Law is superstructure, Life is the basic structure—says Marxism.

Marx hammered home his thesis that jurisprudence suffers from the *dependencia* syndrome, being but the janitor of the dominant class mansion. He said: "Your jurisprudence is but the will of your class made into a law for all, a will, whose essential character and direction are determined by the economical conditions of existence of 'your class'..." (Manifesto of the Communist Party).

We now come upon the soul of law as *dharma* whereby norms of social behaviour, with social good as goal, are set. Law is thus social engineering, as Rescoe Pound put it.

Since India is currently a Socialist Republic, social engineering here must shape a jurisprudence congenial to our ideals.

How should this new jurisprudence shape up if it is to bear true faith and allegiance, with functional potency, to the Third World milieu and material conditions of our country? The general discussion on socially sensitive socialist jurisprudence must take us to a concrete critique of the prevailing system from a dialectical angle and this in turn must catalyse specific mutations in our jurisprudential conceptions. My thesis is that there is chronic poverty in our west-based jurisprudence and the desideratum is Poverty Jurisprudence.

What is the adversary system which our courts adopt where two parties fight each other and the judge is mere umpire? We have inherited it from Anglo-Indian process. In an early book, I quoted Sir John Foster, QC representing the Anglo-American voices about this system:

I think the whole English legal system is nonsense. I would go to

the root of it—the civil case between two private parties is a mimic battle in which the champions are witnesses chosen by each side but who are not necessarily people who know the facts. And the battle is conducted according to mediaeval rules of evidence.⁹

Lord Devlin said :

If our business methods were as antiquated as our legal methods, we should be a bankrupt country... There is need for comprehensive enquiry into the roots of our procedure, backed by a determination to adapt it to fit the conditions of the welfare state.

An eminent Britisher observed:

The scales of justice are inevitably weighted in favour of the richest people, who can afford the best lawyers and advice, whereas the person of average income may be excluded from his rights unless he is so irresponsible as to gamble—since there is always a risk that even a small claim might escalate to the House of Lords, wafted on a legal nicety which may be interesting but could result in bankruptcy for him and his family.

Our court-fee system is expensive and complicated. Our civil and criminal procedures are complex and technical. Our legal process is so costly that the poor are priced out of the judicial market. Our appeals are so many, one above the other that it is a ruinous gamble which the poor can never afford. Justice Hegde, while a sitting judge, observed:

There is no gainsaying the fact that we are saddled with a legal system which is out of the reach of the vast bulk of the population. When the Legal Aid and Advice Act, 1949 was enacted by the British Parliament, the then Attorney-General, Sir Hartley Shawcross, told the members of Parliament that measure would be a passport to the 'little man' to the British Courts of Justice.....I am hoping for the day when we could say the same thing about the 'little man' in this country. It is surprising that our government while professing to be anxious to do social justice should be wholly indifferent in making available to the poor the benefit of the rule of law. The governments appear to have overlooked the fact that administration of justice is a social service. Ironically enough, the civil courts are a source of profit to the government. But yet when it comes to afford-

⁹V.R. Krishna Iyer, *Justice and Beyond*, New Delhi, Deep and Deep Publications, 1980, p. 20.

ing legal aid to the poor litigants, the governments are indifferent.¹⁰

The processual jurisprudence of India, as administered today in our Courts leaves much to be desired, because it is anti-poor.

A strong, though exaggerated criticism has been voiced in some quarters, that side by side in uneasy co-existence, survives a law administration shaped by the British and enshrining values not wholly indigenous or agreeable to Indian conditions, scaring away or victimising the weak through slow-motion justice, high-priced legal service, long distance delivery centres, mystiques of legalese and lacunose laws and a processual pyramid made up of teetering tiers and sophisticated rules and tools. Our nation, with all its hopes and all its boasts, can never really be free and just till all its citizens, high and low, can claim equal justice through law-in-action.¹¹

Radical changes in our judicial procedures are an imperative, if Art. 39A of the Constitution were to be an honest project.

39A. Equal Justice and free legal aid—The State shall secure that the operation of the legal system promotes justice, on a basis of equal opportunity, and shall, in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities.

The whole focus must shift to the people, especially the weaker sector and a new processual jurisprudence geared to the delivery of social justice through simplified inexpensive methods can be, must be designed and executed. Delay in justice which is the rule of life in Indian law, defeats justice, *a la* Bhopal case.

Our Constitution rightly promises social and economic justice as an imperative of our Republic. The have-not sections of Indians—the harijans, the tribals, the indigent and destitute, the bonded labourers, the sick and the handicapped, the rural and urban miseries, why even women whatever their class,—these are the vast and varied categories of victims of injustices. Social justice is a great guarantee of our Constitution to every citizen and its full meaning involves equal rights for the meanest and the humblest and the easy availability of remedies when rights are violated. Rights, without remedies, are ideal adornments; the cutting edge of the law is remedial jurisprudence. Wherever there is a right

¹⁰V.R. Krishna Iyer, *op. cit.*, pp. 22-23.

¹¹Processual Justice to the People, *Report of Expert Committee on Legal Aid*, 1973, p. 9.

there must be a remedy. In our Republic every one has title to enjoy broad equality of opportunity, fundamental and other rights and, what is of strategic significance, effective access to judicial justice according to law. In our constitutional order, a democracy of remedies is integral to the rule of law. Access to justice is the fore-most human right. The have-nots and the hungry, the lowly and the lost, the deprived and the down-trodden are disillusioned by paper rights and, therefore, will be satisfied only if a means of enforcing those rights are within their reach. For them Justice *is* what Justice *does*. Realising the critical importance of equal justice in an unequal society, the principles of State police are constitutionally directed towards poverty jurisprudence with a procedural dimension. Art. 39A of the Constitution commands the State so to shape the legal system as to *promote* social and economic justice. It goes further to mandate equal opportunity to secure justice in court. This is feasible only if pre-legal aids were rendered through suitable legislation or compassionate schemes, through canons and rules of procedural fairness and the active assistance of voluntary agencies. The State is bound to provide schemes and projects legislatively or otherwise to enable citizens, especially the weaker, voiceless, sections to secure justice, notwithstanding economic and other disabilities. Thus, in our Republic, the Justice System has to be conscientised and the processes of law sensitised in such manner that the tearful summons from the oppressed and the suppressed, in search of justice, shall bring into play mechanisms which will rescue the victims of injustices and restore them to the dignity and personality which, as of right, belongs to them and make them partners in the processes of authentic democracy, social, economic and political.

I have briefly explained the social philosophy behind the new trends in judicial justice in favour of the humble millions unable to assert their rights in Court, realising that the existing legal system inherited from the days of the British Raj alienates the masses from legal remedies. The Supreme Court and the High Courts have felt the necessity for creative adaptation and innovative mutations and evolved a new methodology to reaching remedies to the defenceless down-trodden of the country. In its pronouncements during the last decade the Supreme Court has given a radical dimension to adjectival jurisprudence. The concept of *locus standi* was unduly narrow in the old days but is pragmatically broad these days. Class action is now permissible, *pro bono* litigation by public-spirited individuals or organisations on behalf of the community generally or of the weaker sections and silent victims of social injustices and economic exploitation, is now sanctioned by the Supreme Court as legitimate. Any social action group may come to the Court now and champion the cause of the paupers and pariahs of society. Today, we have litigation started by progressive organisations

fighting for gender justice, release and rehabilitation of bonded labour, protection and preservation of the environment against industrial pollution, enforcement of the duties of municipal bodies in preventing insanitary conditions and so on. A number of cases have come before the Courts, not started by the actual victims who are too weak to cope with the expensive sophistries and formalisms of the legal system, but through Good Samaritan Groups and legal aid societies which fight for social justice and seek to secure the fundamental rights of the tongueless little Indian. The Court, imbibing the values of the Constitution, has interpreted many of its articles and legislations passed at the Central and State levels with dynamic liberalism and juristic compassion. The result has been a new wave of hope among the common people from the Courts. *The Judiciary is now taking human sufferings seriously* and is prepared to act even on letters setting out illegal injustices. The Court now holds a new port folio of constitutional grievances, waking up to a profound institutional fundamental that law is only the means but justice is the end. The handicapped humanity of India for the first time is seeing a beam of social justice emanating from the Court system. The Supreme Court and the High Courts, in public interest litigation and social justice action, have resorted to novel methods of discovering facts on their own for the reason that the poor are too feeble to collect evidence and present their case unlike the rich and powerful who have at their disposal legal resources in abundance. Today, the Courts issue commissions to report about actual conditions and even to enforce their orders through directions to officials or specially appointed teams answerable to the Court. In short, there is a significant transformation in the new judicial scenario, a sympathetic phenomenon which enlivens the social justice promise of the Constitution.

However, there is need for caution. Firstly, exaggeration of the new judicial process as if deliverance of the down-trodden is feasible through the forensic process is illusion. Most judges are still conservative. Moreover, all the three Constitutional instrumentalities, including the judiciary, are structured to function within the parameters of a bourgeois society though now with a socialistic slant and people-oriented penchant. To expect overmuch from the judges is to invite disappointment. Therefore, public interest litigation within the existing judicial limitations can advance the cause of people's justice up to a point but not beyond. Nevertheless, radical reforms in the forensic strategies, involving mass action and social locomotion, have a tendency for acceleration of the process itself. Thus, with the involvement of the people in the very administration of justice will emerge a democratised jurisprudence with a new respect for the human rights of the common

people. Judge Power ignited by Lawyer Power and fuelled continually by contact with rural and urban proletarians and social action groups may strengthen People's Power beyond our calculations.

The dialectics of the social forces at play within the Indian polity today must lead to the conclusion that the Judicial Process is bound to undergo a benignly responsive transformation where man—the small man—matters and the court is sensitized to the blood, toil, tears and sweat of the marginalised millions of humans.

The foundation for sound exercise of this burgeoning jurisdiction and jurisprudence is knowledge of public interest law in its popular, poverty dimension. A grounding in environmental justice, labour jurisprudence, land reforms sociology, bonded labourer's lot and like subjects must be in the mental *portmanteau* of the judges. The robes are not a substitute for learning; and power without knowledge can be a dangerous thing. Therefore, on-going education through refresher courses to the judges in the radical substantive and procedural extensions of jurisprudence conceptionally implied in social justice is "a consummation devoutly to be wished". After all, in a democracy judges are subject to social audit and from the people's point of view, Justice *is* what Justice *does*.

The finest hour of Indian Justice and auxilliary jurisprudence arrives only when the articles of the Constitution and the law of the nation, through the judicial and executive processes, interpreted and applied with a benign eye and tuned to social justice, secures the human rights of life, home, freedom from torture, early and inexpensive remedy and equal and realisable opportunity to liberty and pursuit of happiness. The butcher, the baker, the candle-stick maker, the bonded labourer, the pavement dweller, the damsel in distress, the sweated worker, the starving child, the harijan, the girijan and the socio-economic pariah shall have a vested interest in the Constitution, only if the Constitution has a vested interest in their survival and their human worth and personhood. That is the challenge of social justice to Law in India! □

Urban Poverty, Informal Sector and Urban Development

R.K. WISHWAKARMA

INDIA'S PROCESS of economic development during a period of over three decades have undergone various changes in policy planning. The focus was firstly, on spurring growth in regional incomes (SDP) and providing social and economic infrastructure, secondly, on development through growth coupled with modernisation and structural changes correcting disparities among regions and sectors; and thirdly, on progress through simultaneous pursuit of growth with equity, relief in critical conditions of poverty among weaker sections of the society and establishment of new socio-economic order focusing on local administration through administrative decentralisation and popular participation.

These strategies and development efforts although brought about noticeable changes in the production structure, growth in GDP and per capita income, modernisation and development technology, increase in productivity with overall development and improvement in living standards narrowing down the poverty ratio in terms of the "relative gap inequality", "the absolute gap inequality", still continues to persist. The differentials in the absolute incomes and wages and the production structure have not only accentuated the economic ecology of urbanisation (in terms of rural to urban migration) but also the growth of urban poor, *vis-a-vis*, the growth of regional conflicts and politics of urban development.

POVERTY CONCEPT AND DIMENSIONS

Urban poor, for that matter, rural poor are those "whose total earnings are insufficient to obtain the minimum necessities for the maintenance of merely physical efficiency".¹ 'Poverty' and 'subsistence' are,

¹Seebohm Rowntree, *Poverty: A Study of Town Life*, London, Macmillan, 1901, p. 80.

therefore, relative concepts and they could be defined in relation to the material, cultural and emotional (psychological) resources available to a community or different communities over a period of time. Poverty is a dynamic concept, not a static one. It is changing over time and space and there is no list of absolute necessities of life to maintain even physical efficiency or health which applies at any time and in any society without reference to the structure, organisation, physical environment and available resources of the society.²

Although, several efforts have been made by various researchers—Ojha (1970), Dandekar and Rath (1971), Minhas (1970) and Bardhan (1971) to define poverty, the concern for welfare and anti-poverty administration in India has defined the concept of poverty in terms of a yardstick against which to measure poverty and established a fixed level usually known as poverty line,³ below which poverty begins and above which it ends. This concept of poverty is known as absolute poverty. It usually involves a judgement on basic human needs and is measured in terms of resources required to maintain health and physical efficiency.

Most measures of absolute poverty are concerned with establishing the quality and the amount of food, clothing and shelter deemed necessary for a healthy life. Oscar Lewis, an American anthropologist in late fifties, advocated that circumstances of poverty are more or less similar in different societies and they do share a common life style indicating a distinct sub-culture. This line of reasoning has led to the concept of a 'culture of poverty'. "On the level of individual, the major characteristics are a strong feeling of marginality, of helplessness, of dependence and inferiority—a strong present time orientation with relatively little ability to differ gratification a sense of resignation and fatalism."⁴ As

²P. Townsend, 'Meaning of Poverty', *British Journal of Sociology*, Vol. XIII, No. 3, 1962, p. 219.

³The Seventh Finance Commission developed the concept of "augmented poverty line" by adding per capita monthly expenditure on education, social welfare, water supply, sanitation, health, transport, administration, etc., to the private per capita monthly expenditure. Using this criteria, the commission estimated 51 per cent below the poverty line in urban areas and 53 per cent in rural areas at 1970-71 prices. The Sixth Five Year Plan, however, adopted a "physical survival" approach to define poverty line in terms of per capita per day calorie intake, i.e., 2100 in urban areas and 2400 in rural areas. Converting these intakes in terms of monthly per capita expenditure it works out to Rs. 88 in urban areas and Rs. 76 in rural areas. These figures have since been revised for 1983-84 as Rs. 101.80 per capita monthly expenditure for rural areas and Rs.117.50 for urban areas. The plan, thus, estimated a figure of 48.3 per cent of the total population which were below the poverty line (51.2% in rural areas and 38.2 in urban areas). The National Sample Survey in its 38th round relating to 1983 estimated that there were 307 million or 42.6 per cent below the poverty line in 1983 (41.3% in urban areas and 47.3% in rural areas).

⁴O. Lewis, *Five families*, New York, Basic Books, Cf. Haralambos, M., *Sociology: Themes and Perspective*, 1959.

such culture of poverty tends to perpetuate poverty since its characteristics can be seen as mechanisms which maintain poverty.

Certain dimensions of absolute poverty go beyond the notion of subsistence poverty by introducing the idea of basic cultural needs. Drewnowski and Scott⁵ include education, security, leisure and recreation in their category of basic cultural needs. The concept of absolute poverty has been widely criticised as it is based on the assumption that there are minimum basic needs for all people, in all societies. This is a difficult argument to defend even in regard to subsistence poverty measured in terms of food, clothing and shelter.

In view of the above problem involved, the concept of 'absolute poverty' has been replaced by the concept of 'relative poverty'—measured in terms of judgements by members of a particular society of what is considered a reasonable and acceptable standard of living and style of life from time to time. It is in this context that Peter Townsend⁶ argued that any definition of poverty must be "related to the needs and demands of a changing society".

To the concept of absolute and relative poverty could be added a third dimension of "subjective poverty" which refers to whether or not individuals or groups feel they are poor. Ken Coates and Richard Silburn⁷ argued that poverty has many dimensions, each of which must be studied separately, but which in reality constitutes an interrelated network of deprivations. Lewis and Miller⁸ maintained that even if the circumstances which produced poverty were to disappear, the culture of poverty may well continue.

CRITICAL APPRAISAL AND METHODOLOGICAL PROBLEMS

It is but natural to view poverty as a failure to meet basic requirements of a 'decent' life which, of course, varies (over time and space) from society to society. While biological and physical requirements and nutritional norms provide the most elementary concept of basic requirements, the notion of deprivation has to be considered in broader terms to come to grips with the modern understanding of poverty.⁹ It is not only the context of basic requirements but also the method underlying the specification of such requirements which have changed over the last

⁵Drewnowski and Scott, *Women and Socialism*, London, Allison & Busby, 1976.

⁶P. Townsend, *op. cit.*

⁷K. Coates and R. Silburn, *Poverty: The Forgotten Englishmen*, Harmondsworth, Penguin Books, 1970.

⁸Lewis and Miller, "Poverty: Changing Social Stratification" in Townsend (ed.), *The Concept of Poverty*, 1970.

⁹A K. Sen, "Levels of Poverty: Policy and Change", *World Bank Staff Working Paper No. 401*, July 1980, p. 1.

century. The contrast between the nutritional norms used by Booth (1889) and Rowntree (1901) and the rather more demanding requirements used for analyzing 'relative deprivation' in works of Runciman (1966) and Townsend (1974) indicate that both absolute and relative deprivations are essential ingredients of the common understanding of poverty.

Bahro an African writer, draws a distinction between poverty as 'subsistence' and 'misery' as 'deprivation'. It is useful to separate a cultural conception of subsistence living as poverty from material experience of poverty that is result of dispossession and deprivation. Culturally perceived need not be real material poverty. Subsistence economies which satisfy basic needs through self provisioning are not poor in the sense of being deprived. The paradox of crisis of development arises from the mistaken identification of culturally perceived poverty with real material poverty and the mistaken identification of the growth of commodities production as better satisfaction of basic needs.¹⁰ The old assumption that with the development process, the availability of goods and services will automatically be increased and poverty will be removed is now under serious challenge from ecology movements in the Third World. Gustavo Esteva has called "development a permanent war waged by its promoters and suffered by its victims—the poor".

In the light of these parameters, the concept of poverty used has a number of methodological problems as the nutritional adequacy does not depend on the size of income/expenditure alone but the manner in which it is used and spent. Secondly, the level of deprivation in slums and squatters cannot be captured by the concept of 'poverty line'. Thirdly, how do we measure the environmental deprivation and a desirable social income and how do we operationalise them in terms of programmes of poverty alleviations? What is the overlap between physical and economic poverty, on the one hand, and social and personal incomes, on the other? How does the social mechanism, the state of being poor, keep the socially and economically disadvantaged group poor?

The syndrome of poverty in India too has been the concern of all the five year plans which have set specific goals to eradicate poverty. But it was during the Sixth Five Year Plan as discussed earlier, when systematic efforts were made to identify the poor—who form a world among themselves which is too vast and too diverse for any complete description. Although, the monthly per capita expenditure of Rs. 101.80 in rural

¹⁰Vandana Shiva, *Staying Alive: Women, Ecology and Survival in India*, Kali for Women, New Delhi, 1980.

areas and Rs. 117.50 in urban areas,¹¹ corresponding to a calorie intake of 2400 in rural areas and 2100 in urban areas set the poverty line, a combination of 'household' and 'neighbourhood' approaches is necessary to deal with the problems of urban poverty which is too complex in context, texture, characteristics, impact and implications and which cannot be characterised adequately in terms of income and expenditure pattern alone.¹² It is the impoverishment of the poor which is conditioned by the systematic erosion of subsistence: the environment with its life support system consisting of the components of shelter, infrastructure, services and well being and natural resources of land, water and forests.

The National Commission on Urbanisation (NCU) feels that the "focus should be on human degradation resulting from poverty not only on numbers. Thus, what is required is the multi-dimensional concept inclusive of the environment, access to services and social, psychological supports."¹³ As the poor are caught in a vicious downward spiral, poverty leading to impoverishment of resources and impoverished resources leading to increased poverty¹⁴. The interest of the poor can only be safeguarded, if development thinking takes into account the interrelationship of poverty, land-use policies and environmental concern.

POVERTY, DEVELOPMENT AND GROWTH OF INFORMAL SECTOR

If we locate the problems of poverty, unemployment and environmental degradation in the wider context of development and its constituent policies, it is to development then—the lead actor in this play—that we now turn, for some explanation of why and where we have gone wrong, and for future directions as well. "The development of the core sector (power, steel, cement, mother machines, fertiliser and the like) has/is taking place entirely at the cost of informal sector. It is this sector comprising mainly poor household and women which is bearing the brunt of technological displacement. The organised sector displaces too more people than it is able to absorb."¹⁵

¹¹According to the 38th NSSO Round (1983-84) an expenditure level of Rs. 122 per month, per capita was required to reach the desired level of calorie at 1984-85 price levels. By this definition, the percentage of people in urban areas below the poverty line was 27.7. Cf. *Report of the National Commission on Urbanisation*, Vol. II, August, 1988, p. 90.

¹²*Report of the National Commission on Urbanisation*, Vol. II, August 1988, p. 89.

¹³*Ibid.*

¹⁴Kamla Choudhry, "Poverty, Environment and Development", A paper presented at the *First-Joint Seminar of Scientists, Technologists and Social Scientists*, New Delhi, November 1-3-1988 (mimeo).

¹⁵L.C. Jain, "Poverty, Environment, Development: A view from Gandhi's Window", *Economic and Political Weekly*, Vol. XXIII, No. 6, p. 314.

The Seventh Plan recognises the fact that the Indian Industry has steadily become capital intensive which has negative implication for employment generation. And at the same time, it pleads and provides for modernisation *per se* ignoring thereby the need to ensure that "growth and technological change do not case in the immediate future more unemployment and more inequality."¹⁶ Unfortunately, the internal logic of the industrial structure as installed is not inward looking, linking the economy with the rural areas but outward looking, linking itself with international trade and world economy to 'spur' growth to alleviate debt servicing obligations and reduce poverty¹⁷. The Commission (NCU) observed that the capital intensive nature of modern enterprises in the urban economy, industrial locational policy, energy crisis, industrial sickness, labour unrest, restrictive legislation, frozen housing activity and the low level of investment in the development of urban infrastructure and services have colluded to keep down the growth of urban employment. An informal sector has been growing interstitial spaces of economic activities ignored or exploited by the formal sector.

The Commission (NCU) also observed that while population growth in urban areas through natural increase and migration from rural areas as well as small towns continues unabated at rate of approximately 4 per cent annually, the capacity of urban areas to create jobs in the formal sector has been dwindling. This is the reason why the informal sector has been growing more in larger cities which have sizable 'autonomous' demand creating better conditions for informal sector to subsist and expand.¹⁸ The notion that informal sector constitutes merely an aspect of underdevelopment and dependence and as such it cannot in any way promote economic and social development being a residual sector of the last resort, is not however, convincing as the subsistence part of the sector explains the existence of a relatively marginalised cheap labour in urban areas which remains vulnerable to exploitation directly or indirectly by subcontractors—or dependent units. The process of urban development and building of new town attracts to the sight a large or increasing population for what the plan has not provided, "Paradoxically the renowned town planners and architects, including Le Corbusier and his team at Chandigarh have always forgotten that in order to realise their projects, a large and increasing number of building workers and their families would have to be involved, housed and kept alive in that particular place...The informal city had already started to develop

¹⁶K.S. Krishnaswamy, "Issues for the Eighth Plan", *Economic Times*, June 18, 1987.

¹⁷L.C. Jain, *op. cit.*, p. 314.

¹⁸A. Kundu, and P.N. Mathur, "Informal Sector in Cities of Different Sizes: An Explanation within the Core Theoretic Framework", *Regional Development Dialogue*, Vol. 5, No. 2, Autumn 1984, pp. 82-85.

besides the planned city. The growth of huts, encampments, street hawkers, informal markets and other activities of the kind."¹⁹ About 49 per cent of total enterprises are in the informal sector—consisting of shops in planned commercial buildings (2251), shops in planned residential buildings (357), and shops in informal sector (2481) (Madhu Sarin: 1974) spread everywhere and survived every attempt on the part of the authorities to remove them. The study on informal sector in Ahmedabad (Papola: 1978) reveals that 52 per cent of the city's labour force was engaged in the informal sector. While the ORG study in Madras placed the size of this sector at 50 per cent in 1979. But the study of Bombay on surplus labour and the city (Heather Joshi and Vijay Joshi, 1976) revealed that of the total informal sector, 83 per cent was engaged in retail distribution group including improvised hotels and restaurants, 15 per cent in repairing and two per cent in petty manufacturing. About 80 per cent informal enterprises (units) were found to be operating in existing formal market concentrations and on an average employed 1.4 persons per unit, while 67 per cent units were owner (self) employed. As against this, the planned shopping units engaged, on an average, 2.7 persons per unit and the proportion of owner-occupied (single units) being 33 per cent only.

INFORMAL SECTOR AND URBAN DEVELOPMENT

Since the informal sector is not an individual entity in itself but inter-linked to the production economy as a whole, the development strategy emphasising the independent growth of this sector may be self-defeating.²⁰ The size and growth of informal sector is more related to the real wages of the urban poor than with existence of employment opportunities in the formal sector. A decline in the real value of the minimum wage increases the size of informal sector by increasing the participation rates of women and teenagers.²¹ It may be worthwhile to explore those context in which small scale enterprises survive, and may even have the potential to generate growth and employment and raise the status of urban poor. The ways in which the informal sector grows and contributes to development and modernisation are:

- (a) The high degree of self-help and self-consumption to be found in the informal sector favours self-sufficiency and considerable

¹⁹Enzo, Mingione, "The Informal Sector and the Development of the Third World Cities," *Regional Development Dialogue*, Vol. 5, No. 2, Autumn 1984, p. 71.

²⁰T.S. Papola, *Informal Sector in an Urban Economy: A Study in Ahmedabad*, Lucknow, Giri Institute of Development Studies, 1978.

²¹S.A. Morley, *Labour Markets and Inequitable Growth: The Case of Authoritarian Capitalism in Brazil*, New York, Cambridge University Press, 1982, p. 180.

savings in terms of imports of subsistence goods (*i.e.*, the levels of imports and national indebtedness would be much higher, if urbanisation was not accompanied by a rapid expansion of the informal sector);

- (b) the low-cost and the high flexibility of labour reproduced in the informal sector attracts foreign and local capital into industrialisation ventures which will in the long-run lead to development and modernisation; and
- (c) it is not true that manufacturing part of the informal sector cannot become accumulative".²²

The growth and development of informal sector is an asset to an urban economy. A rise in the real wages can improve the physical quality of life and an improvement in the situation of poverty. Wade argues that "the behaviour and attitudes and values of the poor are a response to their immediate deprivation, change the opportunity structure, give them resources and their behaviour will change and rapidly and with a lag—their attitudes and values as well. Hence, culture of poverty, urban-rural dichotomy and marginality are misnomer concepts". This might be one of the reasons for the Commission (NCU) to come out with a 'New Deal' for urban poor.

The Commission²³ feels that bold, intensive and coordinated efforts are needed to improve the income and consumption levels of the bottom 30 per cent of our population and extend their access to basic environmental and social services by ensuring their better utilisation. The Commission has suggested the institutional set-up and administrative arrangements required to deliver the package effectively. The package outlines interventions strategy in the: (i) Income and Employment; (ii) Basic Services; (iii) Shelter; (iv) Public Distribution; (v) Social Security; and (vi) NGO Sectors. The suggested programme package consists of:

I. Programme for Enhancement of Income and Employment Opportunities:

1. National programme of employment training for urban poor youth.
2. National programme of credit support for expanding micro-enterprises and technological upgradation.
3. Micro-enterprise infrastructure development support (marketing and production centres).
4. Marketing development supports.

²²Enzo Mingionie, *op cit.*, p. 67.

²³Report of the National Commission on Urbanization, *op. cit.*, pp. 100-101.

5. New programmes of public assets creation for promoting wage employment for urban poor.

II. *Extension of Basic Services:*

6. Universalisation of Urban Community Development (UCD) and Urban Basic Services (UBS) activities.
7. Educational support for extension of family planning and maternal and child health services.
8. Intensification of non-formal education for school drop-outs and working women.
9. Slum Improvement, shelter upgradation, sites and services schemes, land supply, tenurial security and facilitation through participatory approaches and NGO involvement.
10. Extension of public distribution system.
11. Extension of the family security programme
12. Support for innovative programmes of voluntary agencies.
13. Support for training and action research in urban poverty.

The Commission estimated that the programme package will require an outlay of Rs. 10,750 crore over a period of five years and bring about substantial income and employment benefits to 44 lakh families, while 63 lakh families will receive benefits of multiple services.

Although, the Commission (NCU) has commissioned a number of studies on poverty and suggested a number of programmes for alleviation of poverty under New Deal for urban poor, neither the undergoing programmes have been evaluated for their effective monitoring and implementation, nor the commissioned studies have answered such questions as to :

- (a) how urban poverty is influenced by the production-oriented programmes, such as, employment generation, slum improvement, housing and upgradation of services?
- (b) how the quality of life is related to the consumption-oriented programmes such as nutrition, health care, etc?
- (c) how local organisations dealing with poverty alleviation interact with these types of programmes? and
- (d) how urban administration and urban policies are effective in reducing urban poverty and improving the quality of life?

These unanswered questions further set the ground for deeper probe and research in these areas. □

Urban Informal Sector: How It Should be Understood?

P.M. MATHEW

THE NATIONAL COMMISSION on Urbanisation, set up by the Government of India in 1985, and the report of which has recently come out, has brought to the limelight the problem of urban poverty much more than ever before. The Commission has recommended setting up of three specialised financial institutions, as well as a permanent National Urbanisation Council with counterparts in each state. It has further advocated that, in order to ameliorate urban poverty, self-employment of urban poor must be encouraged by an appropriate credit support programme, supervised by an Urban Small Business Development Bank. In order that the benefits of any development policy for the poor reach them, an understanding of the structure and linkages of what is described as the "urban informal sector" is essential. This article is an attempt in that direction.

Before going into the subject matter of our article. It is essential to make a few words of warning. The "urban informal sector", as elsewhere, has already been much discussed by Indian scholars too. The focus of such discussions so far has been on the definition and size of this 'sector'. However, beyond such definitions and estimates, it is necessary that an understanding of the actual functions of the 'informal sector' within the economy as a whole be made. Such an understanding is essential for evolving any realistic policies towards promoting the best interests of the participants of this 'sector'. The thrust of this article is more on this neglected aspect, than what has been conventionally attempted by scholars.

FORMALITY-INFORMALITY: WHAT DO THEY MEAN?

The term 'informality', 'informal' has been defined *by negation* both in the dictionary of English language and in the semantics of social sciences. What is not 'formal, formality', by that definition, is 'informal', 'informality.' What is "in accordance with rules, customs and conven-

tions" is formal and by extension of this logic, "strict attention to rules, forms and conventions" implies formality.

Such a definition raises two important questions: (1) "rules, customs and conventions" of what?, and (2) who makes them or for whom are these meant for? The answer to first question is that these rules, customs and conventions are meant for the smooth functioning of a productive system, an *economy*. An economy can be described as the sum total or arrangements for the production and distribution of goods and services. These arrangements take different forms according to variation in the ownership of the means of production, *i.e.*, according to whether they are in private hands or more socially owned. The economy where private ownership of the means of production is the order (capitalism) has a motive force: maximisation of private profits, whereas under social ownership of the means of production, (socialism) the motive force is an egalitarian society and maximisation of social welfare. Therefore, the function of formality in a capitalist economy is to provide suitable conditions for maximisation of private profit. In the long run, it implies the maintenance of these conditions which assures the smooth functioning of such a social order.

Since private profit is its motive force, capitalism can, within certain constraints, redefine *what is* formal and *what is not*, at private will. Therefore, the interests of the capitalists are reflected in these "rules, customs and conventions". By the same logic, informality under socialism, if at all it exists, should be to the wider interests of society.

The "rules, customs and conventions" of any society relates to two aspects: (a) production; and (b) exchange. The output produced in any economy is the result of man's interaction with nature. In this process he enters into certain relations with his fellow beings who own the means of production. Those relations are called the relations of production. Man also enters the market for exchange of some commodity, including labour power. These mutual relations are called exchange relations. In any society, there are certain norms by which these two types of relations are formalised. Any relation that is not so formalised is an *informal* relation.

At the very outset of our discussion on this topic, a distinction between the 'informal sector' as it has been conventionally viewed, and *informalism*, which I consider to be a more correct term, has to be made. This is necessary in order to avoid confusion in thought and to assure clarity of ideas. The former is a relatively more rigid concept, whereas the latter takes into account the complexities of the real world of human relations in a better way. The former assures that informal/formal relation can be clearly delineated and both operate in isolation. But this is not often true; these relations do, in fact, operate in an intertwined fashion.

The Informal Sector

Let us begin with the concept of 'informal sector'. This concept has its roots in the early theories of economic development and growth. The work of Simon Kuznet was the original contribution in this area. Economic growth has been defined as a process by which a country's real national income grows over a period of time. A corollary of this is the growth in employment and shifts in employment from the agricultural sector to industry and subsequently to the services sector. Simon Kuznet's belief in a capitalist system which assures full employment in the long run, made him to conclude that all countries will follow the same pattern of growth though there may be differences in the rates of growth.

Kuznet, along with subsequent writers in the area like Lewis and Fei and Renis, assumed that the agricultural sector is traditional in techniques of production and low-income generating and the industrial sector as 'modern', high-income-generating and urban-centred. This induced theorists to discuss the issue of immigration from the rural to the urban areas in search of work.

What happened to these immigrants became the theme of investigation for social scientists in the 1950's and 1960's. Empirical exercises in the case of many developing countries showed that the transfer of labour from agricultural to the modern sectors is not as smooth as it was perceived to be and that there was a real difference between the growth experience of the developed and developing countries. The immigrant labour instead of being absorbed in the 'modern' sector, tended to be increasingly engaged in self-employment and other low-paid activities such as shoe-shining, hawking and even prostitution. These activities began to be described in development literature as 'informal sector' activities.

Keith Hart was the first to use the term 'informal sector'. Based on the 'concept of income opportunities' he made a two-fold distinction of employment: (a) wage employment; and (b) self-employment. Employment in the former was associated with wage employment, while that in the informal sector with self-employment.

Keith Hart's line of analysis received more concrete shape in the report of the ILO/UNDP Kenya Employment Mission which was published in 1972. Perhaps for the first time, this report recognised the positive role in economic development of the shoe-shine boys, petty traders, the street hawkers, the 'working poor' and other groups of the cities of developing countries who are not fully employed. This concept relates to both individuals and occupations.

The central theme of a number of studies that followed can be broadly grouped into four:

- (a) The constituents of the informal sector,

- (b) Explanation for its emergence, existence and proliferation.
- (c) Its role in labour absorption and income generation.
- (d) The nature of relationships between the formal and informal sectors.

Size and Structure

It is now widely accepted that the informal sector is a crucial part of the urban economies of developing countries. The results of various studies conducted by the ILO show that 25-70 per cent of the urban labour force is engaged in such activities; in income terms, its share ranges between 20-45 per cent of the total urban incomes.

A recent study by the Asian Employment Programme of the ILO shows a picture of the stagnancy of the organised sector in most Asian countries. In India and Bangladesh, the share of non-agricultural employment in the labour force has not increased in the last decade. The rise in working-age population is simply too big to be absorbed by the 'organised' industry and service sectors. In Bangladesh, manufacturing employment has increased by four per cent per year, but this has not absorbed more than around five per cent of the annual increase in the total labour force. In India, only about 10 per cent the new entrants to the labour market have been absorbed by the 'organised' sector, and about one-third of this number by manufacturing industry. In Thailand, employment in services has grown twice as fast as in manufacturing. In the case of most Asian countries, it is the service sector rather than manufacturing which has claimed a major part of the increase in the non-agricultural labour force.

The ILO, which was instrumental in highlighting the positive role of informal sector activities, sponsored two types of studies: (1) city studies; and (2) country studies. Inherent in the former type of studies is a concept of migration, mostly from the rural to the urban areas. The assumption that informal sector is a 'marginal' activity which disproportionately attracts new migrants, is a fairly old idea. There are evidences, mainly from countries in Latin America, which suggest that new migrants from the rural areas flood into such activities concentrated mostly in urban areas. For example, 82 per cent of recent migrants to Asuncion worked in the informal sector activities and 70 per cent of those who had lived in Santo Domingo for less than one year worked in the informal sector, while two-thirds of the informal sector workers in Guayaquil were migrants. Evidences are available from African and Asian countries too. For instance, a high proportion of young, male migrants to Jakarta became hawkers. In Africa, on the other hand, where migrants are often regarded as 'strangers' it may be difficult for them to find regular wage employment.

Whether migration does take place or not, for any activity which can

be described as *economic* in nature, the *real* actors of the scene in a capitalist social formation are labour and capital, though their interests may often be expressed in a subtle fashion. A crucial characteristic of a capitalist system, as expounded by many theorists, has been the buying and selling of *free* wage labour. Though this situation does not exist under *self-employment*, it does not simply rule out the presence of a capitalist system; even if the relation between labour and capital is not *capitalistic* directly, labour is still subject to the other rules of the game in a *capitalist* system: the market relations, *i.e.*, their role as buyers of raw materials and sellers of their output. In fact, it is often not because of their own choice, but according to the interests of the profit-motivated capital, that the self-employed remain as they are and not as wage-earning workers. In a wider sense, these are arrangements made by capital to its wider interests. What has been described as "neo-classical economic theory" conceives these rules of the game under capitalism as objective, *i.e.*, as determined by the inter-play of certain *objective* forces. This, however, is not true. Under any socio-economic system, the *dominant class(es)* has a crucial voice in determining the gravity with which these forces operate. The ways in which surplus is generated and the means of channelising it are influenced significantly in tune with the needs of maximisation of private profit. These specific ways differ according to situation and time. There are ways which are purely formal and well-developed which one may attribute to a relatively developed capitalist system; there may also be informal and round-about relations. Both these types of relations may coexist though the intensity of each may vary. Such heterogeneity in relations between labour and capital cannot be perceived in terms of a 'sector' as this concept itself embodies an inherent meaning of homogeneity of its constituents. Therefore, it is better to use the concept of informalism as it is *observed* in the productive system rather than a concept of 'informal sector'.

FORMS OF INFORMALISM

The ways in which informalism manifests itself vary. An important aspect is the division of the labour market (apparent or real) according to criteria such as gender, age and length of service. Such segregation of the labour market enables the capitalist to differentiate payments to each category of workers according to their particular characteristics. The very fact that women and children are concentrated in some industries and activities, enables the capitalists to depress wages and working conditions there. Examples are: garment-making, fish-peeling, cashew processing, etc. Some industries and activities have been delineated for woman and are termed "women-preferred industries" on

arguments such as their special skills and dexterity in executing certain tasks. In fact, in most cases, it is the lower wages paid which opens up greater employment opportunities to them in such activities.

The women-preferred tasks or industries are often in the large-scale sector. The participation of women in the 'informal sector' are comparatively low in most developing countries: 25 per cent in Freetown, 11 per cent in Kano, 15 per cent in Lagos, 12 per cent in Colombo and 25 per cent in Jakarta.

Female participation is mostly greater in trade and domestic services.

Another major form of informalism has been the categorisation of the workers according to their experience in a particular line of production. Even in lines of production where skill requirement and, therefore, experience is absolutely insignificant, the ranks of workers have been divided by the employers according to arbitrary categories such as 'permanent', 'temporary' and 'casual'. Such categorisation, while enabling them to minimise the total wage bill, also strikes at the roots of any form of effective unionisation by the workers.

ROLE OF MIDDLEMEN

Another manifestation of the emerging informalism has been the increasing role of various types of middlemen in the economy. The clear expression of this role of middlemen has been the growth of the services sector in the economy. There are two theoretical positions regarding the role of the trader in the economy. One of them views private trade as highly employment-generating. However, the second one, a widely held view, is that traders act as a powerful agent of underdevelopment. While, exchange is an important function in both the commodity and money markets, an indiscriminate growth of the traders as a class will have only a negative effect on the growth of such markets. Trade itself turns into a sterile activity which does not contribute to the productive potential and growth of the economy. The mercantile class exerts a strangle-hold on commodity and money markets, appropriates and perpetuates monopoly profits to be reinvested unproductively in conspicuous consumption. Therefore, the contribution of any investment programme to growth of the economy and distributive justice depends on its ability to generate and induce the linkages in the economy. Some studies, however, have shown that, in India, the Community Development Programme and the IRDP have contributed, by and large, to the growth of such investments.

LINKAGES

The view that informalism has a particular function of maximising

surplus and channelising it, demands that the development of the former should be examined in relation to that of the latter. The apparent logic favouring the so-called 'informal sector strategy' expounded by various scholars and international institutions such as the ILO, is drawn from the considerations of employment and income distribution. The efficiency of such an argument requires an examination of the working of labour markets (*i.e.*, the different terms and conditions under which workers are employed and work is carried out) under both formalism and informalism.

The process of industrialisation and technological changes bring with them changes in the labour market. The mode of production becomes increasingly capitalistic and employment conditions change more towards wage employment from self-employment. This should lead to greater integration in the labour market in terms of the declining role of tiny and small units and their associated traditional and primitive techniques. The Indian experience, indicated by many studies, is that the tiny and informal sector units are not only still very important in terms of their employment, but are increasing over the years in the major urban agglomerations: they are estimated to be between 35 to 65 per cent. Technological linkages and integration between the two sectors are extremely poor. Both labour markets have their distinct laws of operation. Mobility of labour between the two markets (as shown in Fig. 1 extremely low.

The skill requirements in particular lines of production in the two sectors, informal and formal, are represented by the two planes YOZ and YOX respectively. The differentiation based on skill requirements is absolutely low in the informal sectors, therefore, any *small worker* in this sector can be a perfect substitute for another. But his mobility is confined to the plane YOZ. His graduation into plane YOX is limited by various barriers. The *big worker* in the figure, however, has greater mobility and has greater chances of going up in the hierarchy as represented by the step-shaped curve. Mobility between the sectors, even in the same occupation, is insignificantly low.

Some studies have shown that, many a time, the degree of exploitation of labour by capital is inversely related to the size and technology of units, because of the variation in unionisation. Therefore, for a better integration of the economic structure as a whole, technologies and labour markets is necessary to reduce the cleavage between large and small units in order to better the economic status of the workers.

Capitalism has a specific function of maintaining informalism; a reservoir of unemployed and partly-employed labour helps to keep the wage rates persistently low. Under this situation, attempts at organising these workers, as experience so far shows, are often fore-doomed to

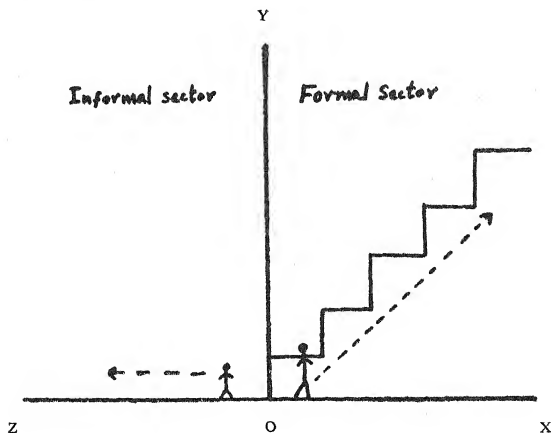


FIG. 1 MOBILITY OF LABOUR: FORMAL AND INFORMAL SECTORS

failure. A gradual expansion of the large enterprises and selective expansion of the small enterprises which possess greater technological linkages with the larger ones, will ensure a greater integration of the labour markets. Such an integration is likely to improve the economic status of the workers in the 'informal sector'. It is also likely to promote greater solidarity among workers of both the sectors coming closer to each other.

Organisation of the workers of the 'informal sector' is a difficult task. The main reason is that the common issues on which they can be organised are relatively less. Therefore, the task before the social activist is to develop more of common issues on which both the workers of the 'formal' and 'informal' sectors can co-operate. Deliberate attempts to reduce schisms among the ranks of the workers as a whole, demands cultural action on an increasing scale. The social scientists' analytical power and the activists' organisational capacities should merge and they should help to produce more worthwhile output through the press and the platform.

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Saving and Indebtedness Among the Poor

RAVINDER SINGH SANDHU

INDIA'S 37 per cent population is living below the poverty line¹ and this proportion is 27.7 per cent in the urban areas. Many studies reveal that in urban India, half to two-third of the population is so poor that they cannot afford cheapest dwellings in the city.² The poor are pushed to those areas of the city, which are called 'slums'. In an urban setting, the poor and the slum dwellers happen to be more or less the same people.³ It does not mean that there are no poor living outside the slums nor does it mean that every one living in the slums is poor. But, then most of the poor live in slum and most of the slum-dwellers are poor. A slum constitutes the physical and socio-cultural environment of the poor.

The present article is based on the data garnered from a study of slums in Amritsar city. The terms 'slumdwellers' and the 'poor' have been used interchangeably. Here an attempt has been made to study the saving and indebtedness pattern of the poor living in slums. Many studies⁴ point out that slum dwellers are too poor to save rather most of them are under debt. But most of these studies were conducted in slums of metropolises like Bombay, Madras and Delhi. Amritsar is a

¹Government of India, *Seventh Five Year Plan 1985-90*, Part II, New Delhi, Planning Commission, 1985.

²M.C.K. Swamy, "Slums: Ruralisation of Urban India", *Nagarlok*, Vol. XIX, No. 2, April-June 1987, pp. 22-28.

³V.S. D'Souza, "Socio-Cultural Marginality: A Theory of Urban Slums and Poverty in India", *Sociological Bulletin*, Vol. 28, Nos. 1-2, 1979, pp. 9-24.

⁴K.N. Venkatarayappa, *Slums—A Study in Urban Problems*, New Delhi, Sterling, 1972, p. 42; A.R. Desai, and S.D. Pillai, *A Profile of an Indian Slum*, Bombay, University of Bombay, 1972, p. 141; P.O. Wiebe, *Social Life in an Indian Slum*, Delhi, Vikas, 1975, p. 44; and T.K. Majumdar, *Urbanising Poor—A Sociological Study of Low Income Migrants Communities in the Metropolitan City of Delhi*, New Delhi, Lancers Publishers, 1983, p. 99.

medium sized city and the findings of the studies based on metropolises, may not hold true for Amritsar. Somewhere else it has been shown⁵ that the slum dwellers of Amritsar, unlike their counterparts of metropolises, are permanent residents, from the same socio-cultural background and live in better housing conditions. But like their counterparts most of them are from the scheduled castes and occupy marginal position in the socio-economic life of the city.

Before studying the saving and indebtedness pattern among the slum dwellers, let us first see the income distribution of the respondents. The respondents were divided into three categories on the basis of income. The first category included those with monthly household income up to Rs. 300. Second category included those with monthly household income between Rs. 301 and Rs. 600, and third category included those with monthly income of more than Rs. 600. Table 1 shows that 9.3 per cent respondents belonged to the first category; 31.3 per cent to the second category; and 59.4 per cent to the third category.

TABLE 1 DISTRIBUTION OF THE RESPONDENTS ACCORDING TO THEIR MONTHLY HOUSEHOLD INCOME

<i>Income Category</i>	<i>Number</i>	<i>Per cent</i>
Up to Rs. 300	28	9.3
Rs. 301 to 600	94	31.3
More than Rs. 600	178	59.4
TOTAL	300	100.0

This presents a very rosy picture of the slum dwellers in Amritsar as compared to their counterparts in other states. However, if we keep in view the fact that Punjab is economically better off than other states of India, with per capita income double than that of the rest of the country; then the economic condition of Amritsar poor is not all that good. At the local level they were at the lowest rung. They have comparatively higher income because of better wages and salary in the state and more than one earners in the household. When their per

⁵R.S. Sandhu, "The Slumdwellers in Amritsar City", in S.N. Mishra (ed.), *Urbanisation and Urban Development in Punjab*, Amritsar, Guru Nank Dev University Press, 1985, pp. 122-130; R.S. Sandhu, *The Urban Poor in Amritsar City—A Sociological Study of the Slum Dwellers*, unpublished Ph. D. Thesis submitted at Guru Nanak Dev University, Amritsar, 1985; and R.S. Sandhu: "Not All Slums are Alike—A Comparison of Squatter Housing in Delhi and Amritsar", *Environment and Behaviour* (Special Issue on Housing in the Third World) Vol. 19, No. 3, May, 1987, pp. 398-406.

capita income was compared to the state per capita, only 7.3 per cent households had more per capita income than the state per capita.

SAVING AND INDEBTEDNESS

To know whether they save or not—the slumdweller were asked a direct question. A majority of the respondents stated that they could not save anything from their meagre income which was expended in meeting their basic needs.

In addition to this, some of them stated that whenever they had some surplus money, they purchased some items of dowry for their daughters. They told that it was very difficult for them to buy everything at the time of marriage. Therefore, they start collecting articles for the occasion 10 to 15 years before the daughters attained the marriageable age. Some of them even bought gold ornaments when they had some money. Some respondents also saved by contributing regular instalments in some sort of saving fund or committee. In case they received some lumpsum payment, they invested it in purchasing certain articles which they could not afford to buy from their regular income. From Table 2, it is also clear that as we go higher in the income categories, the percentage of savers also increases. Therefore, there is significant association between income and saving pattern.

TABLE 2 DISTRIBUTION OF THE SAVERS AND NON-SAVERS
ACCORDING TO THEIR INCOME

<i>Income Category</i>	<i>Savers</i>	<i>Non-Savers</i>	<i>Total</i>
Up to Rs. 300	6 (21.4)	22 (78.6)	28
Rs. 301 to 600	33 (35.2)	61 (64.8)	94
More than Rs. 600	89 (50.0)	89 (50.0)	178
TOTAL	128 (42.6)	172 (57.4)	300

NOTE: Percentages are given in parentheses.

$\chi^2=11.29$, d.f.=2, Significant at .01 level, C=.190

Table 3 shows that majority (52.1%) of the non-scheduled caste respondents were savers, whereas majority (61.5%) of the scheduled caste respondents were non-savers. Therefore, there is positive association between caste and saving. This is because the scheduled caste respondents had lower income as compared to non-scheduled caste

TABLE 3 DISTRIBUTION OF THE SAVERS AND NON-SAVERS
ACCORDING TO THEIR CASTE

<i>Caste</i>	<i>Respondents Categories</i>		<i>Total</i>
	<i>Savers</i>	<i>Non-Savers</i>	
Scheduled Castes	80 (38.5)	128 (61.5)	208
Non-scheduled Castes	48 (52.2)	44 (47.8)	92
TOTAL	128	172	300

NOTE : Percentages are given in parentheses.

$\chi^2=4.89$, d f.=1, Significant at .05 level, C=.12

respondents. They had lower income because they were less educated and were working in low-paid occupations. They were the poorest among the poor.

After identifying the savers, an effort was also made to know the reasons for saving. Table 4 indicates that 28.2 per cent of respondents saved to meet some future obligations such as marriage and other social ceremonies 26.6 per cent saved for emergency and old age and another 8.5 per cent saved for construction and improvement of their houses and remaining 36.7 per cent saved for more than one of the above mentioned reasons.

TABLE 4 DISTRIBUTION OF THE SAVERS ACCORDING TO THE
REASONS FOR SAVING

<i>Reason for Saving</i>	<i>Number</i>	<i>Per cent</i>
Social Obligation	36	28.2
For Emergency and Old Age	34	26.6
For Construction or Repair of House and Property	11	8.5
More than one reasons	47	36.7
TOTAL	128	300.0

The savers were then asked, "where do you keep your savings?" Table 5 reveals that 39.1 per cent of them kept their savings in Post Office or Bank; 28.9 per cent kept their savings with themselves; and 27.3 per cent invested them somewhere. They either bought material for the repair of their house or construct a new one; or they

TABLE 5 DISTRIBUTION OF THE SAVERS ACCORDING TO PLACE WHERE THEY KEET THEIR SAVINGS

<i>Where they keet their money</i>	<i>Number</i>	<i>Per cent</i>
Post Office/Bank	50	39.1
With Self	37	28.9
Invest	35	27.3
More than one	6	4.7
TOTAL	128	100.0

bought gold ornaments or something else which was required for their children in future.

As noted above, majority of the respondents did not save or could not save because of their meagre income. Therefore, they were asked, from where do they get money if need arose. Table 6 shows that a majority (61.8%) of them borrowed from their friends or relatives; 22.4 per cent got loans on interest and one respondent stated that he got money by mortgaging something, and another respondent revealed that he snatched money from people. This indicates that except one respondent, others tried to raise money in case of need by using approved means.

TABLE 6 DISTRIBUTION OF THE 'NON-SAVERS' ACCORDING TO THEIR SOURCE OF MONEY WHEN THEY ARE IN NEED

<i>Source of Money</i>	<i>Number</i>	<i>Per cent</i>
Friends and Relatives	102	61.8
Loan on Interest	37	22.4
Advance from Employer	14	8.5
By Mortgaging/Snatching	2	1.2
More than one source	10	6.1
TOTAL	165	100.0

To determine the indebtedness among the poor, information was collected on how many of them have got loan in the last five years, and for what purpose? How much loan was taken and what was the source of loan?

Table 7 indicates that only 31.3 per cent of the respondents secured loans during last five years. The proportion of debtors is very low in Amritsar as in the case of Delhi, Bombay, Madras, and Mysore; where in 54 per cent, 74 per cent, 75 and 82 per cent were debtors respectively. It was found that poor get loan only when it is unavoidable as a

debtor is not respected in the community. Before taking loan they think how will they repay it, because they do not want to die as debtors.

TABLE 7 DISTRIBUTION OF THE RESPONDENTS WHO GOT LOANS IN THE LAST FIVE YEARS

<i>Response</i>	<i>Number</i>	<i>Per cent</i>
Yes	94	31.3
No	205	68.4
No response	1	0.3
TOTAL	300	100.0

Table 8 reveals that the higher proportion of the scheduled caste respondents got loans as compared to the on-scheduled caste respondents. This shows positive association between caste and debtor. This is again because most of the scheduled caste respondents had lower income as compared to the Non-scheduled caste respondents as they could not save to meet their needs. Table 9 reveals that majority (61.8%) of them got loans for consumption purposes, *i.e.*, to meet some social obligations. One-fourth of them got it for production purposes and 9.6 per cent obtained it for the construction or renovation of their houses.

Table 10 shows that a majority (61.7%) of them borrowed up to Rs. 2,000 and remaining 38.3 per cent got more than Rs. 2,000 as loan during the last five years.

Table 11 indicates that two-fifths of them got loan from their friends and relatives; about one-fourth from their employers; one-fifth from

TABLE 8 DISTRIBUTION OF THE RESPONDENTS ACCORDING TO CASTE AND WHO GOT LOAN IN THE LAST FIVE YEARS

<i>Caste</i>	<i>Response Categories</i>		<i>No Response</i>	<i>Total</i>
	<i>Yes</i>	<i>No</i>		
Scheduled Castes	74 (35.6)	134 (64.4)	0	208
Non-scheduled Castes	20 (21.7)	71 (77.1)	1	92
TOTAL	94	205	1	300

NOTE : χ^2 was calculated after leaving the no response category and percentages are given in parentheses.

$\chi^2=7.25$, d.f.=1, Significant at .01 level, $C=.15$

TABLE 9. DISTRIBUTION OF THE RESPONDENTS WHO GOT
LOANS ACCORDING TO THE PURPOSE FOR WHICH
LOAN WAS GOT

<i>Purpose</i>	<i>Number</i>	<i>Per cent</i>
For Consumption	58	61.8
For Production	23	24.4
For Investment in House	9	9.6
For Litigation	3	3.2
More than one purpose	1	1.0
TOTAL	94	100.0

TABLE 10. DISTRIBUTION OF THE RESPONDENTS WHO GOT
LOAN ACCORDING TO THE AMOUNT OF LOAN TAKEN

<i>Amount</i>	<i>Number</i>	<i>Per cent</i>
Upto Rs. 1,000	32	34.0
Rs. 1001 to 2,000	26	27.7
More than Rs. 2,001	36	38.3
TOTAL	94	100.0

TABLE 11. DISTRIBUTION OF THE RESPONDENTS WHO GOT
LOAN ACCORDING TO THE SOURCE OF LOAN

<i>Source</i>	<i>Number</i>	<i>Per cent</i>
Friends/Relatives	38	40.4
Employer	27	28.7
Bank	20	21.3
Money Lender	9	9.6
TOTAL	94	100.0

the bank and one-tenth from the moneylender. The data show that most common source for getting money for the slum dwellers was informal networks and least common source was the moneylender.

CONCLUSIONS

The studies available in India point out that the slum dwellers cannot save rather most of them are under debt. But the data given above

show that more than two-fifths of them saved regularly for their social obligations and emergency needs. They kept their savings in the Post Offices/Banks or spent on buying gold ornaments or improving their houses. Major source of borrowing for those, who did not save, was not the moneylender but relatives and friends. About one-third of them got loan during the last five years mainly for fulfilling social obligations and for production purposes.

The conclusions reached here are not in concordance with the conclusion of other studies which were mostly conducted in metropolises. From these and other findings⁶ regarding the characteristics of the slum dwellers of Amritsar, it is clear that they are markedly different from the slum dwellers of metropolises and this may be true in case of other small and medium sized cities also. Therefore, during the formulation of plans for the slum dwellers/poor in India, special attention must be paid to those living in small and medium sized towns. This could be done only if detailed studies of such areas are available. But due to scarcity of the detailed studies of slums in different classes of towns their understanding is incomplete. Therefore, detailed studies of slums in small and medium sized towns are inevitable to understand their problems in a right perspective and to evolve a meaningful strategy for solving the problem. Otherwise in the absence of such studies, our policies and plans will be guided by studies which are not relevant to the situation; which means wastage of scarce resources, which we cannot afford as a poor nation. In short, this is hightime to have plans for solving the problems of the poor/slum dwellers at local level according to their needs in a specific situation. It will save time, energy and money and will help us in achieving our objective in a logical way. □

⁶R.S Sandhu, *op. cit.*

Ahmedabad 2001: Planning for the Poor—A Focus on Self-Employed Women

RENANA JHABWALA
and
USHA JUMENI

ANY CONSIDERATION of the future of Ahmedabad must take all citizens-poor and rich equally into account. This is our national commitment inscribed in the Constitution and reiterated in any number of policy statements of Central and State Governments.

A city in which the majority of residents live in poverty can be neither a peaceful nor stable civic order. Unless the planning for the future takes cognisance of the poor and their needs, the city planning efforts will inevitably be subverted.

Unfortunately the city planners and decision makers are rarely in touch with the poor and fail to take into account this perspective. In this article we propose to use our experience with the poor in SEWA, to draw attention to some of the areas, where the needs of the poor should be accommodated.

The poor constitute an important part of our country's population. At the end of the Sixth Five Year Plan, 38 per cent of the population was officially declared below the poverty line. Many researchers have disputed this figure claiming it to be much higher. Whatever the exact figure, the numbers reveal the very large section of population who are poor. In order to earn their living most of these poor people have to do work in what is often referred to as the 'informal' or 'unorganised' sector. In fact, only 11 per cent of the total workforce in our country is in the organised sector, the rest 89 per cent being without the security of a regular job.

These people have been referred to by various names:

'Unorganised', 'informal', 'marginal', 'unregulated', 'peripheral', 'residual.' But such negative terms give them an inferior and insigni-

ficant position in the economy, whereas in fact they are in the centre of it and contribute a great deal. To give them positive status, dignity and recognition and to draw positive attention towards them, we call them self-employed workers.

Broadly speaking, there are three categories of self-employed workers:

1. Small-scale vendors, petty traders, and hawkers, selling goods such as vegetable, fruits, fish, eggs, and other staples, household goods, garments and similar types of products;
2. Home-based producers such as weavers, potters, bidi makers, milk producers, garment stitchers, processors of agricultural produce, handicraft producers, etc.; and
3. Labourers selling their services or their labour including construction workers, contract labourers, *dhobhis*, cooks, cleaners etc.

The self-employed sector comprises a substantial proportion of the urban work force (45 per cent in Calcutta, 40 per cent in Bombay). Millions of people then, mainly in the low income groups (women, children, scheduled castes and tribes and backward classes), are self-employed. Further, many of the goods and services consumed by the general population are provided by this group in programme aimed at expanding employment opportunities, increasing income, and raising productivity.

In Ahmedabad city, this section of the work force has been estimated between 43 per cent to 52 per cent of the total work force. As data for self-employed workers (as defined here) is not collected separately by the census, these figures are estimations provided by data collected in sample surveys.

Women constitute an important section of the work force within the self-employed sector. Unfortunately there are no reliable statistics of the proportion of women workers in this sector. Estimates range from 25 per cent to 54 per cent. However, certain amount of statistics are available which reveal their socio-economic profile. The data have been collected by SEWA in the course of its work. These are presented in Tables 1 to 3.

About 50 per cent of the self-employed workers live in slums, the rest living in low income housing such as chawls. In 1985, 22 per cent of the population of Ahmedabad was estimated as living in slums. A slum is defined as structures which are "clusters of hutments or are *kuccha* dwellings, having no or having most inadequate amenities such as drinking water, tap and lavatory. It is an unplanned growth without any layout. Dwelling units are, by and large, never completed at a stretch and contain an assortment of materials, old and new. Generally, there is no

TABLE 1 SOCIO-ECONOMIC PROFILE OF SELF-EMPLOYED WOMEN IN AHMEDABAD (1984)

Women	Illiterate	Slum Dweller	Married	Monthly Income	Family Income	Place of work		Take Children to Work Site	Rented Means of Labour	(in percentage)	
						home	outside			Indebtedness	
Garment maker	57	55	72	100	352	99	1	—	20	67	
Used garment dealer	70	80	83	200	300	—	100	65	—	25	
Hand-cart puller	74	80	88	300	400	—	100	85	65	80	
Vegetable vendor	90	95	86	300	400	—	100	38	49	10	
Junksmith	96	70	90	300	400	99	1	—	—	35	
Milk producer	90	30	80	193	374	100	—	—	—	55	
Handloom weaver	77	—	63	62	206	100	—	—	—	71	
Waste picker	92	90	76	82	280	—	100	—	—	80	
Block printer	65	50	60	150	450	80	20	—	96	—	
Bidi workers	70	89	71	250	—	100	—	—	—	64	
Incense stick roller	67	80	80	201	589	100	—	—	—	32	
Papad roller	58	82	58	300	588	100	—	—	—	20	
Head loader	91	96	75	208	373	—	100	81	—	61	
Bamboo worker	90	60	71	150	361	100	—	—	—	67	

TABLE 2 DISTRIBUTION OF INCOME OF SELF-EMPLOYED WOMEN AS PERCENTAGE OF FAMILY INCOME (1987)

Type of work	Upto 10	11-50	51-90	91-100	Unspecified	Total
Scrap Collection	0	0	2	0	1	3
Hawkers and Vendors	11	62	14	57	11	154
Home-based workers	19	140	8	32	6	205
Contract labourers						
in Industry	6	21	0	4	13	44
Services	0	3	0	1	2	6
Transport	2	32	12	3	2	51
Others	5	5	3	6	9	28
TOTAL	56	346	50	142	58	652

TABLE 3 PROPORTION OF WOMEN ARTISANS WHO ARE SOLE SUPPORTERS OF THEIR FAMILIES (1979)

Trade Group	Per cent sole supporters	Widow	Deserted	Sick	Husbands unemployed	Unco-operative
Tailors	36	16	9	2	8	1
Embroiderers	13	10	3	—	—	—
Hand-block printers	30	15	1	1	10	3
Cobblers	19	9	7	1	2	—
Carpenters	28	17	7	1	2	—
Junksmiths	25	14	8	2	1	2
Bamboo workers	16	10	5	—	1	—
Cigarette rollers	21	16	3	—	2	—
Incense makers	30	16	2	3	7	2
Vegetable processors	15	10	2	1	—	2
Fish processors	10	—	8	2	—	—
Papad makers	21	15	1	—	2	3
Pickle producers	2	2	—	—	—	—

plinth nor adequate height at the door or in the centre. They are not necessarily squatter settlements”.

The basic amenities available to those slum dwellers is minimal. About 89 per cent of the slum dwellers depend on common water taps supplied by civic authorities, in the location but mostly on the road. Whereas 11 per cent have to use taps in other people's private compounds, from the river or from a well.

The state of sanitation facilities is deplorable. Whereas 57 per cent use

common toilets provided by civic authorities or private owners such as at the workplace, 93 per cent go to the roadside or in open plots under cover of darkness.

If we acknowledge the fact that poor self-employed workers constitute nearly half of the population of Ahmedabad, and that they live and work in sub-human condition, we must also ask ourselves what should Ahmedabad-2001 be like from their point of view? Our city planning so far has concentrated on the needs of the upper 50 per cent of the population, but surely the lower 50 per cent is as important as the richer half. In fact, it is the poorer half which needs more inputs from the public exchequer while the richer half can fend for itself. In the following sections we have attempted to formulate some of the issues for serving the needs of the self-employed and to suggest some solutions based on SEWA's experience in working with the poor in Ahmedabad city.

The issues faced by poor self-employed workers vary according to the trade in which they are working. However, these issues can be summarised within three broad categories.

Home-based Producers

Home based production is a form which is based on the traditional economy but which has been largely ignored by policy makers and city planners. The National Census lists only 8.8 million workers in 1981, but micro studies reveal that this is a serious under estimation. For example, the number of handloom weavers alone are estimated to be 10 millions. There are two types of home-based workers:

- Own account producers are those who buy their own raw material and sell their own finished product.
- Piece rate workers are given raw materials by and return finished product to a trader or a contractor.

In both cases, however, the homeworkers use their own home as the production centre and also invest in their own tools or machinery. The homebased producer is most likely to be an enterprising woman who looks after the housework and childcare. In every urban area, each slum, each colony of the poor, each *chawl* or tenement is not only a dwelling place but also a throbbing production centre. Given this predominance of homebased work what are some of the problems these producers face and how can they be overcome?

They are invisible to the official statistics and to official policy making. Planing is done as if they do not exist:

- Their earnings are extremely low-level even than other self-employed.

- They face shortage of space as their houses are cramped and over crowded.
- They do not have adequate supplies of basic amenities such as light and water which they need for their work.
- They are unable to simultaneously care for children and do their work. In fact sometimes the work such as bidi rolling is hazardous for the children.

Vendors

The main distribution system in Indian cities is through the system of vending. Yet this system is not recognised, planned for or appreciated and in fact vendors are regarded as 'obstruction' or 'nuisance'.

Vendors provide a useful service to consumers by reaching fresh goods to their houses or close by markets. The variety of goods supplied by vendors are of a quality to suit every pocket and taste, *i.e.*, they reach consumers at all levels.

Vending is a form of self-employment which requires no input of resources from government. In our country where unemployment is a serious problem, vending provides an outlet for the unemployed. The vendor makes no demand on society except for a space to vend.

Although vending is a useful activity and desirable form of employment, vendors face many problems in plying their trades:

- Their trade is considered 'unlawful' and they are harassed by police and municipal authorities as criminals. This is because the law demands that vendors must be licenced and by the easy option of not issuing licences, the municipalities 'outlaws' all vendors.
- Because of their 'outlaws' status vendors are fined, beaten, arrested and have to pay bribes to the police and municipal personnel.
- City planners do not plan for vendors and as a result there are no space available to them. Traditional vending spaces gradually get taken over by high rise buildings.
- Transport for their goods is not available from wholesale markets to retail areas.
- Credit is not easily available to them and they have to pay high rates of interest.
- Women vendors carry their small children with them in the heat and cold.
- Although vendors spend their whole day in the market, basic facility such as toilet and water is not available to them.

Providers of Labour and Services

In the city this is the group which builds the houses and the roads, cleans the city, provides manual transport and provides household

services of all types. Although they service the city they themselves service very little in return. Some of the problems they face are:

- Their work is usually demanding both in terms of time and in terms of physical effort.
- Compared to the effort the earnings are small.
- They often have to live far away from their place of work and transport is too expensive for them.
- Small children are taken to the work site and suffer in the heat and dust.

The Waste Economy

Many often a particular area of the economy is completely ignored by economists. This is the waste economy—the economy which subsists on waste products of industry, agriculture, consumer goods, etc. In India nothing goes unused—scraps of all sorts are raw materials for an industry which produces goods used by all strata of society. The extent of the waste economy in India has yet to be adequately documented but in all cities and even in smaller towns thousands of rag pickers roam the streets. Many rag pickers, almost always women and children, are engaged for collecting rags, plastic bags, polythene sheets, bottles, broken glasses, iron scraps and other materials. Everywhere both consumer products and raw materials are made from reprocessed waste. Waste plastic is turned into buckets, sandals, hose, etc.

The waste economy of any particular region reflects the larger industry which dominates the local economy. In Ahmedabad, the entire sub-economy has grown up around the waste produced by the textile industry. The remnants of cloth, of all sizes, oil stained or in some other way deformed and useless for the textile industry, are sold by weight. Contractors purchase the waste (chindi) and provide it to women who sew it into quilts known as khols. These chindi quilts, though frequently dirty and of poor quality, are used by a large portion of the city's poor. As with the collection of waste paper, the work of stitching chindi is done almost completely by women who go entirely unrecognised as the most crucial workers in this trade.

Perhaps the poorest group among the waste economy workers are the paper-pickers—those women and children who roam the streets looking for scraps of paper to collect and sell. About 67 per cent of these women have family incomes below Rs. 500 per month. About 90 per cent of them live in slums. The average family size is six and on an average over half of the children are not enrolled in school. Eighteen per cent of these women are the sole bread winners in their family.

These women pick paper in order to provide for the survival of themselves and their children.

Shelter

Homes are workplaces for the majority of the population—this cultural and economic reality determines the structure of our economy. Homes should, therefore, be designed keeping this fact in mind. The need for shelter is not just to be measured in terms of so many million people engaged in so many thousands of occupations and work, needing appropriate shelter. The use of space has to be maximized not only to create so many million shelter units but it also maximizes the work requirements of the people who will live in these shelters. Weavers need place for their looms, block-printers need courtyards for their printing tables and for drying the fabric, and bamboo workers need space to keep their bamboo. Each occupational group knows their requirement for space, given that their home is their workplace. But they are not consulted when houses are planned for them. For example, the Housing Board designed first floor flats for urban shepherds in Ahmedabad so that they did not get any space to keep their cattle. It is important to know the detailed occupational activities of the people in the urban areas and in the slums and plan for their shelter accordingly.

The possibilities of commercial and residential areas being combined have to be explored to fulfil this need for all. People's preferences are for village type relationships—cast, occupation, community based homogenous groups need to be clustered in urban centres. This creates a sense of security and also a sense of belonging for the inhabitants. The urban cosmopolitan culture need to be balanced against people's preferences for homogenous groups.

Some Experiences with Empowering the Urban Self-employed

The existing mechanism of the government agencies and departments for establishing contact with the people and generating information about their needs are geared mainly for those people who are in regular salaried employment. Self-employed workers are engaged in informal systems of work. Hence there is very little written documentation available with the concerned agencies and departments, about their whereabouts and related details of income, work, preference, constraints, etc. It is possible to know about self-employed workers only by close association and by constant interaction with them. When they get organised as workers, they form their own representative organisation. It is possible to get information about self-employed women workers through their own organisations. The most reliable information can be generated in this way. With this information, formation of schemes

and programmes for these workers can become very easy. Without much involvement of the organisations of self-employed, the problems like reaching the relevant people, not being able to sustain their interest in the programme and meet the targets of their performance, or misuse of the facilities of the programme, become real. Hence, it is important to understand how to develop a system of involving the organisations of the self-employed women workers in formulating such programmes and implementing them. Here we would like to describe some experiences of how poor women have formed organisations and have affected policy in their favour.

Bidi Workers

SEWA has been working with the self-employed, mainly with women since 1972. One of the main groups is bidi workers, 96 per cent of whom are home-based, living in the slums and *chawls* of Ahmedabad. There are about 10,000 bidi workers in Ahmedabad city. They are given raw materials by an owner or a contractor to whom they return the finished bidis, for which they are paid by the piece rate. They are covered by laws such as the Bidi and Cigar Act, but these Acts are never implemented and the workers are paid extremely low rates, earning only Rs. 7-8 per day. SEWA has organised these women to ask for a higher rate, and their legitimate dues under the laws. As home-based workers, the bidi rollers use their home as their work places, and most of them live in slums, in tiny houses without any amenities. Their main need was for better houses where they could work and look after their children and perform household tasks. So SEWA has worked out a scheme with Ahmedabad Urban Development Authority, whereby house will be built for bidi workers at reasonable prices (Rs. 15,000 each). Rs. 10,000 will be given as a loan from HUDCO and Rs. 5,000 as a subsidy from the Bidi Welfare fund. The houses are so designed that the bidi workers will have a common courtyard to sit together and roll bidis.

Vendors

Similarly, SEWA has been trying to work with vendors to find them a rightful place in the city's economy and planning. An example of this is SEWA's intervention in the crowded centre of Manek Chowk.

Manek Chowk is perhaps the most crowded and congested area in the city. It is the prime marketing area for commodities ranging from silver to lemons, being sold from shops, *gallas*, *laris*, etc. It is also a major artery for through traffic leading to Gandhi Road. Naturally, the Manek Chowk area becomes over-crowded. Unfortunately, the poor vendors were blamed for this state of affairs and many attempts were

made to 'clear' the area from vendors.

These vendors, the majority of whom are women, felt that it was unfair. Many of them had been sitting in the same spot for generations, the spot being handed down from mother to daughter.

The vendors, therefore, went to the Supreme Court. The court ordered that SEWA, the Municipal Corporation and the police sit down together and work out a solution. When we actually tried to work out a solution, we found that the problem was not as overwhelming as it seemed. First of all, in the whole area there were only 323 vendors, which is certainly a manageable number. Various alternatives were explored and finally a mutually agreeable site for resettling the vendors was found on the top of the Manek Chowk fruit market. This alternative site could accommodate nearly 500 hawkers, much more than the existing numbers.

As part of the process of starting a dialogue and proposing joint solutions, SEWA along with Indian Institute of Management had organised a seminar on managing the informal sector hawkers—in which senior officials from the Municipal Corporation, Police, Ahmedabad Urban Development Authority, Town Planning Department, participated along with those from Gandhi Labour Institute and School of Planning.

SEWA Bank

A large majority of self-employed women do not own capital or the tools and equipments of their trade. Consequently they remain vulnerable to the clutches of private money lenders and remain indebted indefinitely at the interest rates which can be as high as 10 per cent per day. Indebtedness puts them in a weak bargaining position with the middleman and traders of their own business, on whom they are dependent for their livelihood, thus perpetuating their state of low wages and insecurity of work opportunities and completing the vicious circle of indebtedness. In order to deal with these problems, SEWA members formed a cooperative bank called Mahila SEWA Sahakari Bank Ltd., whose objectives are:

1. Providing facilities for savings and fixed deposit accounts, thus inculcating thrift in the women, managing their savings and ensuring safe custody of the cash the women receive as loans.
2. Providing credit to further the productive, economic, and income generating activities of the poor, self-employed.
3. Extending technical and management assistance in production, storage, procuring, designing and sale of goods and services. This includes services to buy raw materials, equipment, tools and implements; establishing direct links with industries, wholesalers

and producers from where the borrowers buy rags, scrap iron and wood, bamboo, yarn, vegetables, waste paper etc; guidance in marketing their goods; accounting services to members individually and to women's groups.

4. Providing facilities to rescue their jewellery from pawn brokers and private moneylenders and giving loans against jewellery.
5. Adopting procedures and designing schemes suitable to poor self-employed women, like collecting daily savings from their places of business or houses or providing saving boxes and giving training and assistance in understanding banking procedures.
6. Deposit linked group insurance. Besides, this, the Sewa Bank provides its clientele access to legal aid, productivity training and education, maternity protection, social security and creche facilities through SEWA.

Cooperatives

Self-employed workers can also improve their situation by organising into cooperatives. SEWA has helped its members to organise the following cooperatives in urban areas:

1. Shri Mahila Sewa Sahakari Bank Ltd.—for Banking
2. Shri Abodana Mahila Kapad Chapkaam Sewa Sahakari Mandli Ltd.—for Block Printing
3. Shri Sabina Mahila Sewa Chindi Utpadak Sahakari Mandli Ltd —for Patchwork
4. Shri Bansari Mahila Sewa Vaanskam Utpadak Mandli Ltd.—for Cane and Bamboo
5. Shri Vijay Vankar Mahila Utpadak Mandli Ltd.—for Handloom Weaving
6. Shri Mahila Vikas Audyogik Sahakari Mandli Ltd.—for Carpentry
7. Shri Saundarya Safai Utkarsh Mahila Sahakari Mandli Ltd.—for Cleaning Service
8. Shri Matsagandha Mahila Sewa Machikaam Sahakari Mandli Ltd.—for Fish Vending
9. Shri Jawala Sahakari Grahak Bhandar Ltd—for Kerosene Vending
10. Shri Hariyali Mahila Sewa Sahakari Mandli—for Vegetable Fruit Vending
11. Shri Pethapur Mahila Kagar Utpadak Sahakari Mandli Ltd—for Paper Picking
12. Shri Sagini Mahila Balsewa Sahakari Mandli Ltd.—for Child Care

SOME RECOMMENDATIONS

Here we suggest a list of recommendations which would go a long way towards including the poor self-employed in the process of development of the city.

For Vendors

1. While planning for any development scheme for the city the planning committee should have at least two representatives of vendors—one male and one female.
2. Income-generating areas like, stations, recreational gardens, hospitals, should have: (a) Ten per cent area earmarked for vendors should be free from any construction. Such spaces should be used optionally to include more hawkers. (b) Facilities like sanitation, water, electricity, creches, storage, places, and shelter from rains should be provided for the benefit of the hawkers. In areas where marketing is a major activity, there should be traffic free "Pedestrian Zones". There should be a permanent coordination cell to deal with the problems of vendors comprising of the police department, AMC Planning Department, voluntary organisations and hawker's representatives.
3. Any new shopping centre to be constructed should have a place for vendors.
4. There should be changes in the Bombay Police Act, (Section Nos. 79, 102). Also the word 'obstruction' should be redefined.
5. The police can enlist help of vendors representatives for control of vendors and traffic. Vendors representatives should be included in the Traffic Advisory Committee.
6. Vendors should be given: (a) Identity cards; (b) Registration numbers; and (c) Licences with photographs.
7. Education classes should be organised for vendors in collaboration with the police department to orient each other and spread awareness.
8. Existing open space owned by the AMC should be allotted.
9. Special buses and trains to transport their goods should be provided.

For Home-based Workers

1. Houses should be designed so as to serve the function of shelter and work space both.
2. Areas where there are a large number of home-based workers should be treated as a 'Cottage industrial estate' and infrastructure of electricity, water, transport and communication facilities, etc., should be provided to them.

3. Each of these 'cottage industrial estates' should have storage space and workshops.
4. Each estate should have community centres to instill a sense of community and to provide services.
5. These community centres should have creches and health services.
6. Representatives of home-based workers should be present on committees involved in planning for shelter.

For Waste Economy Workers

1. The waste of the city economy whether it be industrial, commercial or consumer waste should go directly to the producer. Today the waste is bought by contractors leaving no surplus at all for the actual workers.
2. Storage sheds and workshops should be provided to these workers.
3. The waste workers should be identified and given identity cards.
4. Since they deal with waste, they have many occupational health problems.

These should be studied and safety equipments recommended.

Shelter

1. The right to housing should be recognized as a legal right, *i.e.*, society should be under the legal obligation to provide a minimum shelter to every family which needs it.

Including the Self-employed in Planning

1. The capacity of self-employed workers to understand the various economic forces around their poverty, can be developed through organising them into cooperatives.
2. The input of the self-employed workers can be realistically involved in formulating programmes and schemes for their own improvement through their organisation.
3. The representatives of the self-employed should be included in all policy making bodies. Their needs and opinions should be elicited through surveys and by holding open meetings of the self-employed.

The self-employed are an integral and important part of city life in developing countries, so our cities should be completely different in nature from the cities of the west. This will happen if we genuinely include the poor self-employed in the process of city planning and implementation. When our planners begin responding to the needs of this very large section of people we will begin to evolve a unique type of urban structure.

Appendix

TWO PROFILES OF SELF-EMPLOYED WOMEN

LAXMIBEN TETAJI PATNI

I am on the Executive Committee of SEWA as a leader of vegetable vendors. I have been vending vegetables in Manek Chowk Market of Ahmedabad city since I was a little girl. My mother used to vend there and her mother and aunt also used to vend there. For three generations we have been vending in this market and only now with the help of SEWA's intervention we have been able to deal with the harassment of the police and municipal authorities.

My father came from Banaskantha—that is another district in the north of Gujarat. He used to grow vegetables in the river side there. One year was a bad year. The river changed course and washed away the land where my father's family used to grow vegetables. Then they thought of moving out of that village and came to Ahmedabad. That was some 45 years ago. Many people had been attracted by the work of the textiles mills in Ahmedabad. From our village also people had come and they were tempting my father too to come and live in the city. Eventually he came here looking for work. He lived with friends and relatives. He found work in a mill at a salary of Rs. 12 a month. That was considered a good enough amount at that time. He has lived here ever since. He found a place to stay on his own in Chamanpura and then got married. My mother's family has been living in Ahmedabad for a long time. They have lived in Chamanpura all along as this whole cluster of houses belongs to the Vaghri community.

I have grown up here and I got married also to a boy in same area, so both my homes are close by. I have two sisters and three brothers of which I am the eldest. I never went to school and neither did my sisters. My brothers went to school for a while and then discontinued. There used to be a social worker who used to come to our area to conduct classes. I used to go to see but I never felt like sitting to learn. I was more interested in playing with my friends and in knowing how my mother did business. From the age of 12 I used to go walking to Manek Chowk in the afternoon with my mother's lunch, along with my friends. We used to dance and play all the way so the food would get spilt partly but my mother never complained. We would sit there in Manek Chowk and eat our lunch together. Then my mother would let me sort out the vegetables which were left still with her, to pick out the rotting pieces. These were to be my lot of vegetables for learning how to sell. I would try and take away some of the fresh pieces also along with

the rotting ones so that I could earn more money. My friends would get the same kind of goods from their mothers. So we would go together to the nearby areas and walk around to find customers for our goods. By evening time I would have sold off all the rotting vegetables and got about three pies for them. At that time the currency was in annas and pies. I would go with my friends to Puri Bazar which is nearby, buy some puris¹ and vegetables for one pie and come back to Manek Chowk. My mother and I would both eat the snacks and then I would sit with her till she finished selling all her vegetables. We would all walk back home together at night. To move around with other women from the same area together was quite safe. This way my routine for quite some time till I became clever enough to do business on my own. This is how my mother taught me the trade and this is how I taught my children the trade. I got more and more practice and increased my competence. After giving me rotten vegetables to sell, my mother would give me a certain quantity to sell sitting next to her. After that she would let me go and buy by myself and let me to do the whole transaction myself.

At that time we used to buy vegetables from the Khamasa Gate underground market. We would buy lot quantities by size and transport it, by handcarts to Manek Chowk and sell also by lots. There was no crowd in Manek Chowk at that time the way it is today. There were no buildings, no roads, no vehicles, no pavements in Manek Chowk. It was an open area with dust everywhere and lot of open spaces. There were no fines, no confiscating of goods by the police and municipality, no terrorizing, no bribes, no free collection of vegetables from us. We were able to earn peacefully. If we earned one or two rupees a day it was considered a princely sum. When I started selling independently I would feel so proud as if I was able to earn eight annas—which is half a rupee—in a day. The amount of money I was able to earn was a measure of my competence in selling.

As I grew older I became more independent. I have always been very independent from the beginning. I got married to a boy in the same neighbourhood. My husband never worked regularly—his income was most erratic. My family has survived on my income and my effort. I have had eight children—four boys and four girls. I have worked hard to raise my family and to save and to establish my household. My children were born at home, except for one boy who was born in the market itself. I have never had any difficulty during child birth. I have worked till the last minute and then delivered the child also. Somehow all my children have survived. I have had to work hard to bring up my children. In the beginning I had to do everything myself. My children used to look after themselves literally. I never had much time for them.

¹An Indian snack.

But afterwards my sister came to help me. I used to go to the market at 10 o'clock in the morning and come back at 9 p.m. I could not do much work in the morning except cook some little snack. I would come-back at night tired after a whole day's work. All the children would be sleeping by then. I would put some rice and pulses (*khichdi*) to cook on the fire. Then I would heat up some water and wake up one child. I would quickly bathe him and feed him some *khichdi*. Then I would wake up the next child and repeat the same procedure. This is how I have looked after my children. The boys studied but the girls were not allowed to study. However, all of them have learnt the trade. I taught them all and they are all able to earn their own livelihood now.

The place where we live is so cramped and crowded. There was no water, no electricity, no sanitation, no flooring when we began living here. Over the years we have been able to acquire some of these basic facilities at our own expense. But it has not been easy till the facilities came. As young girls we had to go far away to fill up water for the household. The boys there would tease us and it was quite unpleasant. For a long time after that we young girls were forbidden to go and collect water. During the rainy season it used to be so difficult with all the slush and dirt and water collected everywhere. It still is difficult but a little better than before.

My contact with SEWA happened through my work. We have seen the growing menace of the police and the municipal authorities on us, in front of our own eyes, as Manek Chowk became more and more urbanised. The buildings and roads and traffic increased continuously. It became increasingly difficult for us to sit there and sell peacefully. Our space steadily shrank. There would be fights with the police, there would be harassment and bribing. A constant fear developed in us of these people. Once a policeman had beaten me on my back and I was very agitated about it. A man came up to me and asked me what happened. I showed him all the marks on my back and told him of our problem. He was an organizer of the Textile Labour Association and he suggested that I go to SEWA. I said I would bring all my women the next day. We went and met Elaben and explained the whole situation to her. That was the beginning of the whole process of getting licences for us to be able to continue to vend in Manek Chowk.

We went to meet the officials of the Municipal Corporation and the Police Commissioner with Elaben. Everywhere we went, there was no support for us—no one was sympathetic or concerned about us. But we were getting more and more determined to solve this problem. We were getting organized. There are a few hundreds of us who sell in this market and in the adjacent Danapith market. Our harassment did not reduce at all. We realized that persuasion and convincing will not work. The police had even decided to evict us forcibly from Manek Chowk because

of complaints from the big shop owners in the *pucca* market in Manek Chowk. We decided to stage a *satyagraha* in protest.

This was our first major struggle with the authorities. At that time we used to feel afraid of the police and the municipal authorities. But over the years as our struggle has shown results, we have also become strong and confident. We realize that these laws are such that we will not get a licence and we will always be considered illegal. That is why all along, our demand has been for licences, so that we are not harassed and fined. We end up paying such large amounts as fines—Rs. 200-300 per month on an average. In addition the police used to come and demand free vegetables everyday. They called us all kinds of names, they beat us, they confiscated our goods, they beat our children, it was horrible!

Our *satyagraha* was successful in the sense that the police could not evict us but we still did not have licences. Our problem became more and more known but it did not change the situation very much. Our efforts culminated in filing a case in the Supreme Court for demanding a licence. We are working honestly to earn our livelihood, we were not asking anything from the government. We are only asking for space to keep two baskets on the ground and be allowed to sell in peace. Everyone has a right to work and earn. This was our demand in the case we filed against the Police Commissioner and the Municipal Commissioner. I was one of the petitioners. I understood the complexities of getting something done through the courts, from the experience of this case. I went to Delhi with Elaben, and our lawyer. I was to speak in the Court. I had to learn to sign my name so I sat and practised and practised and learnt in a day. Then I saw the Court and the whole procedure of presenting our case. I went several times for hearings to Delhi. We won the case and the Municipality was ordered to issue licences. Even after that we had to protest so much and take out a major procession before we actually got licences. It has been a long struggle of more than 10 years but at last we have got licences and no one can throw us out now. Our struggle has ended thanks to the effort of SEWA and the efforts of our women.

My own leadership of the vegetable vendors has also grown with our struggle for licenses. As our meetings in the initial years became more frequent all the women started asking me to talk on their behalf. I was reluctant to do so, but nobody else was ready to take up the role. Since then I have always been with the SEWA organizers who have also changed over the years. And I have been the spokesperson for all our members here. I have attended so many meetings. I have met so many officials. I have represented our problems so many times. Now I have no fear at all of any one. By the group leader representatives of vegetable vendors I have been elected to the Executive Committee of SEWA right from the beginning. I attend meetings regularly. I feel proud to

talk as equals with other women, with officials and other leaders. In my community also I am well responded because of my role in SEWA. The whole pattern of life has become so calm and peaceful now.

SARASWATI RAMESHCHANDRA PADMASHALI

I roll bidis whole day—it is my main source of income. I have been rolling bidis since the age of 13. I had to discontinue my studies because my father could not afford the expenditure. Instead I had to help my mother to roll bidis and contribute to the family income. That is the only work I learnt to earn income and till today that is the only work I know for earning my livelihood. I learnt by watching my mother roll bidis—it is quite a detailed procedure. I have to go and collect the *timru* leaves and tobacco mixture from the owners of the bidi industry—they have shops where the raw material is distributed. We workers go and queue up there in the morning and wait till our turn comes. We work at home and the home-based workers are mostly women. The owners weigh the leave and tobacco for every 1000 bidis and give it to us. We ask for the material according to over capacity to make bidis. Then we bring it home and soak the *timru* leaves for a few hours and leave them to dry. After they have dried, we cut them to shape on a size of a flat metal mould. And then each bidi has to be rolled with a little tobacco mixture put into it. Each one is tied with a piece of thread to keep the leaf and tobacco secure. And the ends are tucked in with a little pointed instrument. It is laborious work and very time-consuming. Between us, my mother and I could make 2000-2500 bidis a day. Sometimes we could make less if there was other work or we were just too tired. In those days I used to help my mother, today my daughter helps me to roll bidi. The work continues as it used to and life continues also. So much has happened in between all these years. I wanted to study but was not allowed after the age of 13 because we could not afford it. I used to resent having to sit inside the house the whole day and roll bidis, get up early, help in filling the water, bathe, have tea and something to eat and sit down to roll bidis. I wanted to go out and play but that was not possible, because the work had to be finished. We used to get Rs. two per 1000 bidis in those days and that money was very important to us. My father used to work in a textile mill and he had stopped working. At the same time, my sister was married and my father had to borrow some money for the marriage. So the income from bidi rolling was a necessity. I never liked doing the house work but I learnt to roll bidis. At first I could roll only 500-600 in a day, but in about six months I could roll 1000-1500 bidis. My younger sister was too small to help in this work and my brothers were not inclined to help.

We are three sisters and three brothers. My parents came from

Sholapur. They used to work on handlooms there. My mother used to roll bidis there too. They came to Ahmedabad because of the possibility of working in a textile mill. Other people also had left Sholapur to come to Ahmedabad, so my father also came, he was about 25 years old then. At first they lived with someone else on the outside of their hut. After a few months my father rented a separate hut—it was in Sharabgal, near Parmanand Chali in the Rakhial area of Ahmedabad. We were born in that house and we grew up there. My parents still live there. We used to go to the municipal school to study. It was some distance from our home and we used to walk down to the school. We did not have many facilities in the hut we lived in. The water was from a public tap outside at some distance, there was no electricity, we had to cook on a wood fire.

When I was 19, I was married to a boy from Andhra Pradesh. He lived in a village in Medak district in Andhra with his parents. His brothers used to work in a textile mill in Ahmedabad. They were going to help him to come to Ahmedabad and work. Hence, my parents agreed to the marriage.

After the marriage I went to the village for a few months and then my husband came to Ahmedabad to work. In the village they used to work as agricultural labourers. In Ahmedabad he started working in a mill.

My husband is dead now. So I can talk about my life spent with him in a different way. Even at that time he was not happy in Ahmedabad. I did not want to go and live in a village so he stayed here and found work. We have three children. They were born here. At first we found a hut in some illegal land. We stayed there for almost 10 years. All my three children were born there. Those days just passed by. I used to roll bidis and do the house work also. It was a difficult life. My children were all born at home. I refused to go to the hospital because I was afraid of being examined by a male doctor. I just refused. My mother tried to coax me to go to the hospital for check-up but to no avail. I did not have any problem at home.

I used to walk for half-an-hour to go and collect the *timru* leaves and tobacco, wait there for an hour or so, then walk back half-an-hour. I used to get up at 5 a.m. and work till 11.00 or 12.00 p.m. in the night everyday. Looking after the children and doing the housework, and rolling bidis—it was quite tiring. Somehow I managed to bring up the children from infancy to childhood. I used to continue working till the very last day my mother would stay with me after the delivery for 2-3 days and then, as soon as I was able to get up I would start working again. After that till a few months, my mother would come in the evening and stay with me at night help me with the housework and go away to her own home in the morning. I had to put my energy in rolling bidis

because the money was necessary for the family expenses. My husband would also help a little bit with the household work. But his heart was not in Ahmedabad—he wanted to go back to his village. I was not keen to go but we were forced to go there. The huts we were living in were razed to the ground one day the land owner wanted to construct something else on his land. Thus we became homeless and my husband decided to go to his village. I went with him.

We lived in the village in Andhra Pradesh for two years. My children were with me. We lived with my parents-in-law. They are agricultural labourers. So I had to do the same kind of work. I never liked it there. I do not like manual labour, work out in the sun and dust. But I had no choice. My children also were largely unattended. Somehow I lived through those years. My mother-in-law was very understanding. She has been very supportive of me all along. I decided to come back to Ahmedabad. My husband refused to come back. There was a major problem in the family, but I had made up my mind. I would come back alone with my children.

My mother-in-law stood by me—she gave me money to come back by train and also a few belongings so I could live by myself. I came alone by train. At my parents home there was trouble awaiting me. They did not like my decision—it was a stigma to them socially—that I had left my husband and come to live here alone. They did not even let me live in their house. I lived with my sister for a little while and then she also said I should find a place for myself.

I had not expected such open opposition and I realised that from then on I would have to manage my life by myself. My sister's husband told me of a vacant plot of land in Bapunagar—where I could put up a hut and live with my children. I went to see the place—it was a barren area—nobody was living there. I was afraid to live there all by myself with my small children. At some distance from this plot of land, a family we knew had their own house. On the strength of this contact I made up my mind to put up a hut on this barren plot of land. Mine was the first hut. It was an illegal occupation but there was no choice—I did not have money to buy a piece of land. With the help of this friend who lived nearby, I put up a thatched hut on bamboos. The walls also were thatched mats. I did not have a door; only a curtain was enough. I was afraid to live there because there was no one else on this plot of land. But I pulled together my courage and was determined to live there. Slowly some more occupants came in the neighbourhood but I was still afraid. For three years I did not sleep at night because there was no door to my hut and I was afraid at night. I used to keep up all night just to keep a watch over my house and my children.

During the day time I used to roll bidis, do the house work, look

after my children. The elder two used to go to school, the youngest one was still too small.... I had so much problem in getting admission for the two children in the school. When we left Ahmedabad one was going to school, the other one was still small. In the floods which had come in the old house, our belongings had been washed away. My son's birth certificate also got washed away. I did not realize its importance then. When I came back to Ahmedabad I had no certificates to show to the school authorities and they were reluctant to admit him. For the girl I could manage from the earlier school, but for the boy I had a tough time. Eventually I was able to get admission for both. At that time primary education was not free. So I had to pay fees. I also had to pay for their books and clothes. They used to go walking to the school. My income from bidis was the only support.

Before leaving Ahmedabad I used to roll bidis for Laxman bidis. We used to get Rs. 7-8 for 1000 bidis. After I came back I went back to him to ask for work. For sometime he gave me work. Then he suddenly decided to close his shop and go away. This was the time I came in contact with SEWA. Kamla, one of the organizers, used to visit our area in Bapunagar. There are so many bidi workers here. She came to my house also. I did not know anything about SEWA but I used to attend the meetings whenever Kamla used to come. There was talk of increasing the piece rates. I became a member too by paying Rs. 5 as fee. I did not see anything to lose but I did not even see much to gain. Earlier I have been involved in struggles taken up by workers. When I was a young girl, rolling bidis with my mother, Indulal Yagnik had organized the workers. We had all gone on a 45-day strike. I used to attend meetings at night, join the processions, shout slogans. The piece rates had increased by Rs. two per 1000 bidis then. Over the years the rates had reached Rs. 7-8 per 1000 bidis. Now Kamla was saying the government had fixed the rates at Rs. 13 per 1000 bidis and we should be getting provident fund and bonus and medical facilities and scholarships and housing facilities. This is all mentioned in the law but we were not getting any of this. I did not know if SEWA would be able to help in getting all this for bidi workers, but there was nothing to lose. So I too became a member.

Our first struggle started when Laxman wanted to close his shop. SEWA intervened and demanded that all the workers be paid closing down benefits. He refused. We all got together and showed him the law. He has not inclined but after a persistent struggle we were able to make him pay each worker a flat sum for the number of years each we had worked with him. I got Rs. 900 I used that money to put a door in my hut. That was the end of one anxiety for me.

After that successful struggle I have become more and more inter-

ested in work of SEWA. I have also become more of a believer in the strength of organizing. We have had so many meetings, we have taken out processions, we have submitted memorandums to the Labour Commissioner. All these efforts have had an effect. Today we get Rs. 13 per 1000 bidis. Even though it is less than Rs. 18 fixed by government, it is more than before. We also get bonus. But the contractors and owners keep hedging on this. Last year we did not get any bonus. We will not give up the struggle though.

We have had a major struggle in getting identity cards—but at last we succeeded. The Bidi Welfare Commissioner has issued I Cards to members of SEWA—this entitles us to the benefits of medical dispensary, scholarships for our children, housing facilities. It is a big step forward for us. My daughter has already finished schooling, so there is no use of the scholarship for her. My son has started working somewhere after studying up to class VIII. He works on an interlock machine nearby. My youngest son goes to school. He would get the benefit of the scholarship. It is Rs. 30 per month, but he had failed last year and could not qualify for the scholarship now. Next year if he passes he will get it.

I have also registered my name in the housing scheme for bidi workers. SEWA has succeeded to persuade the government about the utility of the scheme. It will be only bidi workers living in that new colony. All of us will have proper houses to live in. But my name has come up in the second batch of houses to be constructed. The first one is 250 houses and the next one is 100 houses. Lots were cast and my name came in the second batch. We have to pay instalments of Rs. 70 per month for 20 years and there is also a subsidy. It will take two years at least for my turn to come. Till then I will live here.

When there were riots in 1985, we were also affected. I had got compensation of Rs. 2,000 from which I put up stone walls and a tin roof to my hut. Now it is more secure.

My husband died more than one year ago. We got the news here. I went to the village, and then came back here. Now there is nothing to worry about the social stigma. But I have to continue to live my life. My daughter is grown up. She is 18. She also rolls bidis. She has to be married. My son is working—he earns Rs. 400 per month. His income and my income see us through. My younger son is a constant source of worry. He does not like to go to school and he has to study. I do not know what will happen to him. I am doing my best for my children. I have worked hard and given all I have to them. I have also opened a savings account in SEWA Bank. I have Rs. 200 in that account now. They come home and collect savings. We have a small piggy bank and I put aside some money in it. Every month one of the bank girls comes

and opens it and enters the money in my account. So it is very convenient. I hope the money grows there. This has been my life. It has been hard but now I do not have any grouse against life—whatever has happened, has happened. I hope my children will be happier than me. □

Urban Poverty: How Madhya Pradesh Deals With It ?

SURENDRA NATH

POVERTY IS the greatest scourge and the source of human misery. It, therefore, poses the biggest and the most demanding challenge to governments almost everywhere. Underdevelopment and inequality are the twin causes of poverty. The general answer to poverty lies in economic growth and distributive justice. Articles 39, 41, 43 and 47 of the Constitution of our Welfare State contain directives for the government for dealing with poverty issues. Article 39 contains a directive for affording equal economic opportunities to all citizens. Article 41 lays down that the right to work, to education and to public assistance in case of unemployment, sickness, disablement and old age, etc., shall be objects of public policy. Article 43 provides for affording a living wage to workers and organising cottage industries, etc. While Article 47 recognises the prime necessity of raising people's level of nutrition, health and living.

A PERSPECTIVE OF URBAN POVERTY IN INDIA

The National Commission on Urbanisation (NCU) has observed, in its report (para 5.13) that the share of the poorest 30 per cent in the country's consumer expenditure has remained nearly stagnant during the period 1958-78 which suggests that the poorest of our people have not achieved any better living standards despite the average annual rise, in the National income of about 3.5 per cent.

Urban groups whose average daily per capita intake is below 2140 calories are classed by the Planning Commission as below the poverty line. The calorific standard for the rural areas is 2400. The difference in the two standards seems to be based on the assumption that the rural poor engage themselves in greater physical activity. A "Study for the Formulation of Poverty Alleviation Programmes for Urban Areas" by the National Centre for Human Settlements and Environment, Bhopal (NCHSE) (1987) has revealed that 49.8 per cent of the people living in

slums is engaged as labour, street vendors or domestic servants whose nature of work is equally strenuous if the distances walked by them to procure work or to reach their work place are taken into consideration. The difference in criterion of urban and rural poverty adopted by the Planning Commission is, therefore, debatable.

The definition does not take into account certain other vital dimensions of poverty like environmental and shelter deprivation which are neighbourhood specific and are not directly linked with calorie intake but which equally reflect human degradation and constitute the crux of physical poverty.

Not all urban poor live in slums and not all slum dwellers are economically poor. The poor can often be found distributed throughout a city, living in servant quarters and other places. A significant proportion of slum households who are economically above the poverty line, particularly in metropolitan cities, live in slums because of extreme shortage of housing and high rents. They are, however, deprived environmentally, by way of shelter and services, and would, by many definitions, be characterised as poor. According to an NIUA study, even among those who were poor in income terms, 6.46 per cent had *pucca* houses. Poverty is thus a multi-dimensional concept and it has economic, physical, social, emotional and psychological aspects. Income and food consumption are, therefore, not the only indices of poverty and a substantial number of cases of acute physical deprivation would fall outside the income definition of poverty. In 1983, according to the NSS 38th round, 27.7 per cent of the people in urban areas were living below the poverty line as compared to 41.2 in rural areas, which indicates a much higher incidence of rural poverty. However, urban slums and squatter settlements would present a far worse picture, if poverty was viewed in terms of the overall quality of life, in terms of deprivation of even the most basic shelter, sanitation and hygiene and in terms of health and nutritional standards which do not depend only on the better availability of health services and food.

Rural and urban poverty are inextricably linked. Rural poverty is carried over to the cities through rural-urban migration and is most visible in slums and squatter settlements. Our urban population has been growing almost twice as fast as rural population. According to another NIUA study, normal increase in urban population accounts for 41 per cent of the growth while 40 per cent is due to immigration from rural areas and the remaining 19 per cent due to reclassification of settlements from rural to urban. Thus, urban poverty is not merely spillover of rural poverty. These are two aspects of the same problem and must be addressed simultaneously.

Urban unemployment is politically, economically and socially a more

explosive problem than rural unemployment because in an urban environment the capacity of the family or the society to carry the unemployment is more limited than in a rural environment. The inducement of crime and anti-social avenues of employment are much greater for the urban unemployed, and this gives an additional social dimension and sensitivity to the problem of urban employment. There is thus a qualitative difference between urban and rural poverty. There would hardly be a villager who would not have a homestead, however modest, unlike the urban squatter who is totally homeless.

As already observed, urban population of the country is rising at the rate of about four per cent per annum which is almost double the rate of increase of rural population. Within the cities, slums and squatter population is rising three or four times faster than the general population of cities. The incapacity of the agricultural sector and the rural economy to provide jobs commensurate with the rate of growth of the rural population is pushing large numbers of rural poor and unemployed into the urban areas. Formal sector of manufacturing and trading in the urban areas have a low labour absorptive capacity because of the capital intensity of the formal sector and almost inexistent linkages between the formal and the informal sectors. There is thus, an increasing gap between the population growth and the employment opportunities in urban areas, though there exist slightly higher employment opportunities which seem to bring migrants into cities. This means that urban unemployment will be an ever increasing phenomenon in the years to come. The NCHSE study of 1987, based on survey of slums in Calcutta, Bangalore and Indore, has interesting observations on urban poverty, some of are recapitulated here as follows:

1. The informal sectors of trade and services serve as a sort of haven for most of the job seekers, especially the migrants. About 50 per cent of the total urban employment lies in these informal sectors. More than half the number of households in the informal occupations earn less than Rs. 500 per month.
2. An overwhelming proportion of migrants in the slums is unskilled (71.15%) which is much higher than the proportion in non-migrant households of the slums.
3. Labour, usually loaders and unloaders, constitutes 33 per cent of the slum households. They have to solicit work daily and they suffer from instability, impermanence and irregularity. Master craftsmen like masons, carpenters, tile-setters, blacksmiths, welders, painters, etc., function as some sort of an informal employment exchange for them.
4. Street vendors constitute 8 to 10 per cent of slum households. Their job requires a little marketing ability and a lot of stamina

and patience to work, walk and squat. They require a small capital, or no capital if they can command the confidence of a merchant to obtain goods for selling them on a commission. They have an edge over casual labour in terms of earnings. The itinerant can also be a seller of services which, of course, would require greater skill. Street vendors are an entrepreneurial lot and can derive substantial advantage of well designed poverty alleviation programmes. Their main problem is shortage of funds and harassment by police, food and municipal functionaries.

5. Majority of slum dwellers want to set up shops. This is based on the usually happy example of others, which are all too visible. The failures, however, are not as conspicuous.
6. About 12 per cent of slum households wants to organise units in manufacturing or servicing and engage in skilled jobs. They represent an important segment who can avail themselves of entrepreneurial development and credit service sectors of poverty alleviation programmes.
7. Domestic servants represent one of most economically and socially exploited lot. The majority of them are females, widows or spinsters. Cleaning, sweeping, washing, cooking, looking after children or a combination of these are the tasks performed by them. Most of them are immigrants and a sizeable percentage belongs to the scheduled castes. Their average earnings are about half of other informal workers. Their's is a truly subhuman existence.
8. In any city of any appreciable size, anything between a fourth and a third of the population lives in slums. Approximately 20 per cent of them are unemployed. About 50 per cent are immigrants whereas 70 per cent are unskilled. About 78 per cent are either illiterate or educated only up to the primary level.
9. Seven occupations, namely, street vending, domestic service, shoe making and repairing, carpentry, motor driving, tailoring and dress-making and casual labour including loaders and unloaders account for about 48 per cent of slum dwellers. Another eleven occupations, mostly concerned with construction and commercial activities like brick-layers, electricians, plumbers, hair-dressers, salesmen, etc., add up to almost 58 per cent of the employment profile of the slum dwellers.
10. Fourteen occupations yield incomes higher than average earnings. These are motor drivers, brick-layers, transport equipment drivers, tailors, carpenters, shopkeepers, painters (construction), shoe makers and repairers, mechanics, repairmen, potters, electric wiremen, motor mechanics, electricians, plumber/pipe fitters. These occupations require skill and they have the poten-

tial of absorbing a large number of workers, only if they are provided training in these skills and occupations.

Poverty removal as a dominant objective in India's development strategy appeared since the Fifth Five Year Plan (1974-79). The Plan recognized that large numbers had remained poor despite sizeable gains of economic development. The Fifth Plan, however, made no distinction between rural and urban poverty. A definite approach to urban poverty commenced from the Sixth Five Year Plan (1980-85). The approach consisted of identifying and measuring poverty, developing realistic targets and formulating specific programmes. The Seventh Plan provided for moving 61 lakh of urban population above the poverty line through additional consumption benefits; more equitable distribution of health, education, sanitation, housing, drinking water; slum improvement and environmental improvement programmes.

Up to the Seventh Plan urbanisation was conceived of as an appendage of housing and infrastructure development and was left out of the main stream as a factor of economic growth. The Seventh Plan (1985-90) constitutes the first attempt to address urban unemployment and poverty issues directly while retaining macropolicies involving income growth and distribution and the anti-poverty biases of various sectoral programmes. It recognised the need for a multipronged strategy to deal directly with urban poverty for:

1. providing gainful employment to the unemployed, particularly women and youth;
2. raising the earnings of those already employed in low paid jobs;
3. stepping up the productivity and earnings of the self-employed workers; and
4. improving the access of the urban poor to basic amenities and services like potable water, sanitation, health and education.

The major programmes can be grouped as under:

- (i) Shelter and physical environment improvement programmes.
- (ii) Nutrition support including public distribution system.
- (iii) Programmes of employment generation, development of citizen participation and development of institutional capacities of service agencies.

URBAN POVERTY ALLEVIATION PROGRAMMES IN MADHYA PRADESH

Madhya Pradesh is well known as the country's largest State in terms of area. The urban population of the State was 20.31 per cent of its

total population according to 1981 Census which means about 106 lakh of people, while the urban population of the country as a whole was 23.3 per cent of its total population. The decennial rate of growth of urban population in Madhya Pradesh during the decade 1971-81 was 56.03 per cent as compared to 49.53 per cent for urban India as a whole during the same period. One of the causes of this fairly high rate of growth of urban population in the State was that the number of settlements classed as urban increased from 250 in 1971 to 327 in 1981. Of the 106 lakh of its urban population, 13.18 lakh belong to the Scheduled Castes while another 4.34 lakhs belong to the Scheduled Tribes, together constituting about 16.5 per cent of the urban population of the State.

According to the Sixth Plan document, 48.09 per cent of the urban population of Madhya Pradesh was living below the poverty line in 1977-78 as compared to 38.19 per cent for the country as a whole. Only two states in the country had a higher percentage of urban poverty than Madhya Pradesh—Kerala (51.44%) and Uttar Pradesh (49.24%). These estimates were based on the NSS 32nd round (July 1977-June 1978). The next quinquennial survey (3rd survey) of consumer expenditure was done in January-December, 1983 by the NSS in its 38th round and its results were published in April 1986. According to this survey, though Madhya Pradesh continued to rank the third poorest in the country in terms of urban poverty levels, it had improved by 17 points in six years, while Uttar Pradesh had improved only by 9 points. The most impressive record was that of Kerala which improved by more than 21 points. According to this survey, as compiled by the NIUA in Urban Data Sheet, 1986, the percentage of urban population living below the poverty line in 1983-84 in some of the states having the highest incidence of urban poverty was as follows:

Uttar Pradesh	40.3
Bihar	37.0
Madhya Pradesh	31.1
Tamil Nadu	30.9
Kerala	30.1

Incidentally the overall poverty level including both urban and rural population, according to this survey was the highest in Bihar (49.1%) followed by Madhya Pradesh (46.2%), Uttar Pradesh (45.3%) and Orissa (42.8%) in that order.

Madhya Pradesh was, perhaps, the first State in India to constitute a department of Urban Welfare in 1984 for devising and implementing specific programmes for the economic upliftment of the urban poor. Tenurial security was granted on encroached public lands by an Act of

the State Legislature (Madhya Pradesh Nagariya Kshetroke Bhumihin Vyakti (Patta-dhruiti Adhikaron ke Pradan Kiyajana) Adhiniyam, 1984. Under this Act encroached public land not exceeding 50 sq mts stood settled with the landless persons who were in its occupation on the April 10, 1984. An alternative land was to be provided if for some reason it was not possible to grant homestead rights on the encroached piece of land. The Act applied to all district headquarters towns and those with a population of more than a lakh according to the last Census. About 1.48 lakh families were granted permanent leases under this Act while another 20,000 were granted temporary leases for resettlement on other suitable sites. About 40 per cent of the benefited group belongs to Scheduled Castes and Scheduled Tribes. It was decided to provide a single point electricity connection to the settled hutments. About 90 per cent of these families have been provided with electricity connections. More than 25 per cent of the persons benefited, belongs to the Scheduled Castes and Scheduled Tribes. In June 1988, it was decided to extend the facility of a single point electricity connection to the temporary lease holders also and more than 3,000 of them have already been provided with the connections. A sum of about Rs. 1.5 crore has been spent on developing alternative sites for the settlement of temporary lease holders.

An environmental improvement programme was started in the cluster of permanently settled hutments. Under this programme drinking water facility, public toilets, drains, path access, street lights and community centres were provided at a ceiling cost which was fixed at Rs. 250 per person but was later revised to Rs. 300. This programme has benefited about three lakh persons in the State at a cost of Rs. 717 lakh in the last four years.

In 1984 another programme for the benefit of the urban poor, a Special Training and Employment Programme for Urban Poor (STEP-UP) was also launched in Madhya Pradesh. This was a programme for dovetailing government subsidy at rates varying from 25 per cent to 33.3 per cent with institutional credit for self-employment ventures for family income groups of Rs. 4,500 per annum and less. It had a component of vocational training for imparting and upgrading skills of the poor urban youth in the age group of 40 years and below. The extent of subsidy was fixed at Rs. 3,000 and the overall project limit was set at Rs. 12,000. Families with an income up to Rs. 3,000 were eligible for concessional rate of interest of four per cent under the differential rate of interest (DRI) scheme of banks. The proportion of subsidy for members of the Scheduled Tribes and those engaged in unclean professions was 33.3 per cent while for the Scheduled Castes and others it was 25 per cent of the project cost. The self-employment ventures eligible for assistance under this scheme include furniture making, flour-mill,

ready-made garments, shoe making and repair, blacksmithy, cycle repairing, motor rewinding, embroidery, cycle ricksha operation, pan-bidi-cigarette stall, tea stall, stationery and newspaper dealers, vegetable and fruit vendors, retail traders, watch repairing, small workshop, barber shops, laundry, tailoring unit, agarbatti making, welding, hand cart operation, bamboo products, bangles and cosmetics trade, beedi making (individual or cooperative), broom making, fair price shops, papad and potato chips making and selling, fruit stall and juice shops, loudspeakers, sound systems, tents, etc., rental meat shop with refrigerated storage facility, mining leases, hoarding rental, photo and portrait framing, operating mosaic polishing machine, tyre retreading, mini poha making unit, detergent powder making, wax and candle making, sweater and woollen garments knitting, hosiery making, book binding, etc. Credit up to Rs. 5,000 is available under the scheme for housing and house repairs also, and the house is viewed as a work place. Government agencies, workshops and ITIs (Industrial Training Institutes) are involved in imparting training for self-employment. Detailed household surveys were done in all the 327 towns. Traditional skills and vocations are kept in view while identifying the training and self-employment area which would suit the family. District Antyavyasayi Societies, which were already taking up similar programmes for the Scheduled Castes and Scheduled Tribes were asked to take up the STEPUP cases also under the control and guidance of the Collector of the district. The programme was started in 11 divisional headquarter towns and four other districts viz., Chhindwara, Ratlam, Durg and Khandwa where the population of urban poor was sizeable. Later on it was extended to all the 327 urban areas in the State. In the last four years about 68,000 families have been provided credit and subsidy assistance of about Rs. 800 lakh under this scheme. Of these about 4,000 belong to Scheduled Castes/Scheduled Tribes. A sum of about Rs. 40 lakh has been spent on the training component of the scheme.

A similar programme was started by the Government of India in September 1986 known as 'SEPUP' (Self-employment Programme for the Urban Poor). A sum of Rs. 200 crore was earmarked to be advanced as credit by the banks to urban poor whose monthly income did not exceed Rs. 600 for 35 economic activities including hawking on hand cart, laundering, welding, cycle rickshaw operation, shoe making, hair dressing, etc. The income impact of the programme was favourable and in the very first year loan assistance was provided to 2.6 lakh persons. This programme has no component of subsidy. It was effective in towns with a population of more than 10,000. The loan assistance was limited to Rs. 5,000 per family and was available to only those who were residents in the town for a minimum period of the past three years and held a ration card.

In 1984 ownership rights were granted to rickshaw pullers in Madhya Pradesh by the Madhya Pradesh Cycle Rickshaw (Regulation of Licences) Act, 1984. Under the Act licences could be granted to only such persons who propelled the rickshaws themselves. Those who let out the rickshaws to others were thus compelled to sell off their rickshaws. They were persuaded to sell their rickshaws to those who were plying them and a time limit of six months was granted for this purpose. Widows and disabled persons could, however, continue to let out their rickshaws for plying by others. Credit was advanced to the rickshaw pullers under the SETPUP for buying their rickshaws. In the last four years about 14,000 of the 30,000 rickshaw pullers in Madhya Pradesh State had been helped to become owners of their rickshaws. They were thus assisted in improving their income and were liberated from exploitation by the owners.

After 1984, the year 1988 saw the next spurt in urban poverty alleviation programmes in Madhya Pradesh. On the pattern of rickshaw pullers, hand cart pullers were also granted ownership rights by the Madhya Pradesh Hand Cart Pullers (Regulation of Licences) Ordinance, 1988.

A group insurance scheme called 'Suraksha' was started in Madhya Pradesh from 1.11.1988 covering licenced rickshaw pullers, tangawallas, hand-cart pullers, loaders/unloaders in agricultural mandis, gumti or small shop holders, etc., in age group of 18 to 59 years with the assistance of the LIC and the Government of India. The annual premium per person is Rs. 50 of which Rs. 20 is payable by the insured, Rs. 15 by the State Government and Rs. 15 by the Government of India. Under the scheme Rs. 5,000 is payable on untimely death, Rs 10,000 on accidental death within three months of accident, Rs. 3,750 on permanent disability in an accident and Rs. 2,500 on partial disability due to accident. In the case of disabilities the remaining amount of Rs. 1,250 and Rs. 2,500 respectively would be payable to the nominee on the death of the insured person.

Another scheme called 'Suvidha' has been started in November, 1988 for giving training and employment to urban poor in various services like electrician, plumbing, carpentry, radio/TV repair, car/scooter repair, canning of chairs, construction repairs, gardening, depositing bills of electricity and water for a fee. Cooperatives would be organised for delivering these services, on telephonic requisition wherever feasible. Training would be arranged under the 'SEUPUP' in polytechnics and with selected mastercraftsmen. This scheme would fill up a felt gap in the prompt and organised availability of these services and would also provide employment to the needy urban poor.

A scheme called 'Rainbasera' for providing temporary dormitory shelter to the unemployed who come to cities in search of employment

was started in late 1988 in 17 cities of Madhya Pradesh having a population of onelakh and above. The accommodation would be made available on payment of Rs. 1 per person. Durry and blanket would be provided besides toilet facilities, canteen facilities, television sets will also be provided in each dormitory which will cater to a group of about 100 to 200 persons. There will be separate dormitories for men and women. These would be managed and maintained by the Municipal Corporation. Fortyfive per cent of the cost of construction, including land, would be provided by the Municipal Corporation. Government would provide margin money to the extent of 25 per cent of the cost. The balance would be met by a bank finance which would be underwritten by the state government. As most of the beneficiaries of the scheme are expected to be persons belonging to the scheduled castes and scheduled tribes, the Department of Scheduled Castes/Scheduled Tribes Welfare of the State Government would be financing and sponsoring these projects.

Mobile latrines of 10 units each costing about Rs. 1.35 lakh are being purchased by the Municipal Corporations in Madhya Pradesh for the facility of those encroachers who are to be shifted to other suitable sites. The state government would provide 75 per cent of the capital cost as grant. These mobile units can be carted by tractors. They can be emptied at trenching grounds or biogas plants. These units can serve fairs, public gatherings, religious festivals, marriages, etc., and would help in keeping the city clean.

An urban community development project with urban basic services is being started in Indore city with Overseas Development Aid. The project includes environmental improvement of the 183 slums in Indore and seeks to provide social infrastructure like health coverage, education, child and maternity health care, nutrition support, non-formal education, *balwadis* and creches. The slum upgradation component of the project (Environmental Improvement Programme) envisages to provide one flush toilet for every 10 households, one water tap point for every 20 households with some individual connections, vehicular access within 50 metres of each hut, paved pedestrain access to each hut and one street light for every 50-60 metres of road or paved path leghth. The total project cost is Rs. 2,434 lakh and is to be executed in five years after approval of the ODA slum upgradation. Work in 22 out of these 183 slums has already been under taken by the Indore Municipal Corporation with the assistance of the World Bank. Environmental improvement works have also been done in these slums at a cost of about Rs. 63 lakh between 1972-73 to 1980-81.

A summary critique of the State efforts aimed at urban poverty alleviation would take note of the following:

1. Tenurial security to hutment dwellers has not been adequately

followed up with shelter upgradation finance. The SEPUP provides for such a finance, treating the house as a place of work. But, according to available information, not many have been helped in improving their shelter under the scheme. In fact, credit support for self-help housing ought to have been as a fullfledged complementary programme of tenurial security. Housing for the poor can also be housing by the poor. Such a programme can tap the capacity of the poor to house themselves as an economic resource for housing.

2. The urban poverty alleviation programmes in Madhya Pradesh were either started in 1984 or in 1988. The State was in stewardship of Shri Arjun Singh as the Chief Minister in both these years. The programmes have not been steadily followed up and they are still in the nature of pilot programmes. Several complementary linkages have yet to evolve. The State Government themselves are aware of this and they are undertaking evaluation and impact studies to identify and plug the loopholes and provide complementary linkages.
3. There is no guidance and counselling bureau yet for the urban poor and the urban unemployed who need these services. These bureaus can help the urban poor in identifying their enterprise, learning necessary skills and preparing bankable projects. They can be located in the 'Rainbaseras' which are being built in Madhya Pradesh. Monitoring of proper utilisation of these subsidies and unsecured loans to urban poor requires extra vigilance and caution in view of the mobility, instability and lack of identity of urban poor when compared with their rural counterpart. Urban poverty alleviation programmes have been given as an extra undertaking to the Madhya Pradesh. Antyav-yasayi Nigam is thus overburdening its already none too strong infrastructure. The infrastructural weaknesses of the implementation agency are in the notice of the State Government and efforts are being made to organise the structure of the department to meet challenges.
4. Vast facilities of vocational training in various Industrial Training Institutes (ITIs) of the State have yet to be utilised adequately. It is imperative to draw up detailed training programmes for the urban poor tapping the training resources of the State fully.
5. Poor publicity, lack of administrative commitment in the executing agency, defects in identification of beneficiaries and target groups, improper coordination and procedural complexities are some of the other general weaknesses of the programme. Let me add, that these are the general weaknesses of most of the

poverty alleviation programmes, not only in Madhya Pradesh but throughout the country. Corruption is another general weakness which is all too widespread, and not so only in Madhya Pradesh.

FUTURE POLICY IMPLICATIONS

Urban poverty manifests itself in many forms, the most visible being environmental and shelter deprivation, slums, the casualisation of labour, health and nutritional deprivation, deprivation of basic services like hygienic water and minimal sanitation, hopelessness, frustration and rising crime rates. The task of alleviating urban poverty involves reduction of exploitation, relieving misery, creating more humane conditions of work and living and adequately feeding, educating, housing and employing those who have already made the city their home or are in the process of doing so. Urban poverty, thus, cannot be the undertaking of any single department of the government. It is too complex and important to be left only to those technically responsible for urban development.

The new deal for urban poor would include income and employment generation programmes, improvement in basic services, shelter, upgradation, strengthening of the public distribution system, social security and non-government organisation (NGO) sectors. Credit support for micro enterprises, technological upgradation, marketing and production infrastructure development would be important components of income and employment programme. The NCU has recommended the setting up of a National Micro Enterprises Development Bank which will give refinance to the commercial and cooperative banks. Local bodies should set up micro business infrastructure development and facilitation cells which should look after rationalising regulatory requirements to facilitate micro-business activities. Credit support services will also have to be provided to urban poor for identifying eligible beneficiaries, administering a risk guarantee and subsidy fund, monitoring, counselling and linking with funding and marketing support agencies. Creation of public assets through wage employment in the urban area on the pattern of National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) would also have to be thought of. Urban Community Development Programme (UCD) and Urban Basic Services (UBS) programmes which are yet in the nature of pilot projects would have to be universalised. A strong thrust of vocational training, skill upgradation and adult literacy would be an integral part of poverty alleviation programmes. This is because towns and cities are centres of employ-

ment and effective employment requires skill. The infrastructure and facilities for imparting skills in urban areas are much better than what is available in the rural areas. In the urban areas 46 per cent of the poor, as compared to 39 per cent in the general population, are under 14 years of age and they can be very good recipients of training programmes. We must make use of this favourable environment, which some people call urban economies. Changes in town planning laws, municipal laws and bye-laws would be necessary to create a climate of facilitation for non-formal sector activities, which at present have mostly to be carried out under a cover of graft and political patronage to keep off the coercive arm of the government.

While organised labour through collective action, has been able to improve its terms of employment, unorganised labour, especially women and children, in the informal sector of the economy has remained unprotected despite some regulatory legislation and minimum wages Acts. Organisation of the urban poor into cooperatives and groups should be taken up as part of urban community development package.

Some street or pavement space should be provided to street vendors, shoe makers and other similar self-employed persons who operate under conditions of extreme insecurity.

Where poor settlements are located under formal manufacturing activity, possibilities of building linkages between the formal manufacturing activity and the informal sector should be explored. This would lead to creation of jobs in the informal sector commensurate with the capital investment in the formal sector.

A programme of urban public works like improvement in water supply, sewerage, drainage system, renewal of city parks, tree plantation, cleaning of polluted water bodies and waterways, clearing of accumulated garbage should be taken up for wage employment. This would also result in improvement and renewal of city. We must recall here what Le Corbusier had said of cities—"Cities which do not rebuild themselves continuously die".

While several items of the programme would require funding, it is necessary to give priority to employment and income generation programmes in allocating outlays. Habitat related programmes have been on ground for a long time. The income generation programmes are very new. They have immense potential because small business and enterprise benefit not merely the owner but several others in terms of employment and other linkages. Unless key priority is attached to them, the existing programmes for physical construction may eat up the limited resources.

No poverty alleviation programme can succeed without effective population control. More than two per cent of our average 3.5 per cent

growth in national income is being consumed by the growing number of our people. We have not consolidated in the present decade the momentum gained in this sector in the previous decade, and this should be cause of concern to policy-makers and planners.

The wider the gap between the facilities available in the hinterland and the city, the stronger is the pull of migration into the city. The dilemma is: if no facilities are provided in cities and urban resettlements, it raises human problems; and if facilities are provided, it attracts more squatters. Such, unfortunately, is the vicious circle of poverty and underdevelopment. In times to come, it is not only the rural poverty but the dehumanising conditions of living in expanding slums and squatter settlements of cities which will pose the greatest challenge to social, economic and political order. □

Urban Poverty—The Bombay Scene

P.K. MUTTAGI

THE CITY of Greater Bombay with an area of 433 sq km is the *urbs prima* of India. It has developed and grown to its present size in the last 250 years. It began as a congregation of a few scattered islands inhabited by fishermen. On account of rapid industrialisation, it has developed into one of the largest cities of the world. While Greater Bombay constitutes about 0.2 per cent of the area of the space of the state of Maharashtra, its population is about 12 per cent of the state population and has almost 46 per cent of the total factory employment in the state. The population of Bombay has grown from 5.97 million in 1971 to 8.24 million in 1981. Today it might have crossed nine million mark.

THE SETTING

It is well known that like other cities in developing countries, Bombay faces the problem of poverty, unemployment, inadequacy of housing and infrastructure. But what distinguishes Bombay from several other cities is the scale and intensity of these problems. The severity of the problems reflects primarily the rapidity of overall population growth and the acute shortage of resources with which to equip the population, particularly the poorer segments. An attempt is made in this article, based on the findings of our studies*, to identify certain characteristics of the poor and to suggest some measures to improve their quality of life.

The basic configuration of poverty in Bombay and for that matter in any city in the world is well-known. The available statistical data do indicate that a sizeable population of this city is ill-fed, ill-clothed, illiterate or under-educated and their dwellings lack civic amenities. They are prone to diseases and have a weak political voice. The living conditions of the poor are getting worse day by day, the main problems being

*For further details kindly refer to *Nature of Poverty in Greater Bombay : A Study of the Social and Psychological Aspects of Poverty* by P. K. Muttagi and C.A.K. Yesudian, Bombay, Tata Institute of Social Sciences, 1984.

overcrowding, dreadful conditions of housing and sanitation, a near collapse of civic services, unemployment and under employment. It is, therefore, necessary to understand the distinctive characteristics of the poor.

The poor in Bombay live in chawls, slums or shanty towns and on the pavements. The number of the poor living in the chawls is very small. They are poor in the sense that their income is very low. Although economically poor, their life styles are different from those living in the slums.

Most of them have some sort of assured job, occupation or income, their dwellings are better equipped with water and sanitation facilities and their values and aspirations are like those of the class above them. An overwhelming majority of the poor live in the slums and on the pavements.

A slum is any area of unauthorised and sub-standard housing. In keeping with this definition, many old localities with dilapidated buildings have been declared as slums. In its census of slums (1976), the Bombay Municipal Corporation adopted a narrower definition, confining the census to unauthorised hutments or chawl-type semi-permanent structures. This coverage is more compatible with the accepted idea of an Indian slum—a congested, insanitary locality consisting of clusters of hutments. Slums have grown faster than Bombay's population. In 1960, the slum population constituted of only 12 per cent of Bombay's population. The figure had grown to about 22 per cent by 1970. In 1976, BMC in its census found over 28 lakh slum dwellers living in 6.2 lakh huts in 1680 slums areas or pockets. They thus, constituted about 40 per cent of Bombay's 1976 population of about 70 lakh. Thus, in 1981, an estimated 36-37 lakh people would have been living in Bombay's slums—about 45 per cent of the population. Since 1981, in view of the sharp increase in housing prices in Bombay, this percentage must have increased. It is reasonable to estimate that nearly half of the Bombay's population is now living in the dilapidated chawls, slums and on the pavements.

Data collected in two major studies have been presented in Tables 1 and 2. These data suggest that a large number of households living in slums belong to the non-poor category.

Following profile emerges of Bombay's slum dwellers :

- (a) The fairly well-off occupant who has a secure skilled labour or white collar job, or a small scale business, sometimes within the slum itself (sometimes illegal). Perhaps he has been the longest staying resident and may have created some of the newer huts. This slum dweller represents between five per cent to 10 per cent of

TABLE 1 INCOME DISTRIBUTION (1976)

<i>Monthly Household income</i>	<i>% of slum income</i>	<i>% of all households in Bombay</i>
Less than Rs. 200	12	7
Rs. 201—350	28	12
Rs. 350—600	39	35
Rs. 600—1000	14	25
Rs. 1000+	4	21
Not recorded	3	—
TOTAL	100	100

SOURCE: Slum Census, Government of Maharashtra.

TABLE 2 INCOME DISTRIBUTION
(TISS DATA FOR 1977)

<i>Monthly family income (Rs.)</i>	<i>Greater Bombay</i>		
	<i>Slum</i>	<i>Non Slum</i>	<i>Pavement dwellers</i>
Up to Rs. 200	12.3	1.7	20.3
201—450	53.4	9.7	55.7
451—1000	23.8	32.7	20.0
1000+	7.8	53.5	0.7
Not recorded	2.7	2.5	3.3
TOTAL	100	100	100

SOURCE: TISS Data for 1977.

the total population and could afford formal accommodation with unsubsidized interest.

- (b) The middle income earner with current monthly income averaging between Rs. 400 to Rs. 800 per month. About 60 per cent of the slum population is employed in a white or a blue collar permanent job. His income will rise with time; he would have some savings, but may be reluctant to use them for housing. The chances are that he paid a consideration for his present tenement and might value it as an asset. He could, with persuasion and a definite security of tenure, be persuaded to opt for formal housing with subsidized interest.
- (c) Forming the lowest 30 per cent to 35 per cent, the real urban poor, sparsely educated, he is either in an unprotected job, or employed in the traditional sector. He is, however, within a

close-knit interdependent community, which he considers essential for his survival. His children like himself may be trapped in a vicious circle of poverty. He is either from the original village whose economic activity is obsolete or a "rural refugee".

(d) In only four cases out of ten, will he be of Maharashtra origin.

The pavement dwellers are the houseless families literally living on the roadsides or in busy streets in the city and suburbs. Their dwellings are found in the vicinity of the railway stations, in the areas of commercial activity, around docks, and the localities in which the local authorities have provided public baths, latrines and urinals. Several families which have chosen the Bombay footpaths just for survival have been living there for varying durations of time from one to over fifteen years. Some are born there. They erect temporary unauthorised structures, made up of plastic, polythene or cardboard sheets tied to a couple of bamboo sticks without any construction whatsoever. It is easy to put up structures, but easier to dismantle them especially when the occupants are apprehended by the enforcement authorities, but that rarely happens. Some families, perhaps the less enterprising ones, take shelter under rail or road bridges, flyovers, culverts or even in the huge cement pipes lying around in open space untill the pipes are put to use.

They erect a place of residence, they hardly reside in it. They live around it. They have no cooking facilities, no place to take bath or wash clothes and utensils, no adequate place to relax, no water and latrine facilities, and not even a residential address. While they have abundant and free access to the open sky—a facility rarely provided for, in modern flat type constructions, they are also more exposed to the elements of nature by way of wind and air, sun and rain. Perhaps they are among the poorest of the poor in urban areas. Although no exact figures are available, the present figure of the houseless population is likely to be in the region of two to three lakh.

The pavement dwellers are a mixed and myriad crowd, quite a few having landed there as a result of the pull factors—the attractions that the city of Bombay holds for people from other parts of the country. There is also a large section of migrants who have been pushed out of their native place by circumstances such as floods, drought, poverty and unemployment, but even in these cases, it is equally true to say that both push and pull factors operate though the degree may vary.

Most of these dwellers admit that their contact with the more fortunate neighbours in the nearby edifices is mostly casual, although some say they do odd jobs for them, like carrying a parcel or two for which they are paid on the spot. In a few cases, the women folk, dwelling on the pavements, are employed as domestic help by the nearby residents,

They do not resent their lot, nor do these affluent sections protest about the squatters with conviction enough to pose a serious threat to their way. The rich are content to dole out a few coins to the children along with a few choice invectives. The pavement dwellers in turn are content with the scraps and crumbs tossed to them by whim, fancy or fear. They are a peaceful lot otherwise, for they stand to lose their shelter on the pavement if they disturb the affluent or indulge in fights with their fellow dwellers.

Asked whether they were happy and contended with their existing way of life and were adjusted to it, the data oddly enough revealed that, by and large, these dwellers were rather satisfied with their lot, though there were some mixed reactions to be sure.

Pavement dwelling is a deep-rooted malady. Although there are several poverty groups, the pavement dwellers are the poorest of the poor. In sum, the poor living in the chawls are the least poor. Those living in the slums are poorer than the chawl dwellers. The pavement dwellers are the poorest of the poor.

Further, the poor do not form a single and homogeneous group whether they live in chawl, slum or on pavement. Some of the poverty groups require very little help, others require massive effort on the part of the government and other public and private organisations to rehabilitate them. This is so because the poor include among others, the unemployed, the self-employed, the casual labour, the aged, the destitute, the beggar, the physically handicapped, the mentally sick and so on. Though lack of financial resources is common, each group has peculiar problems, handicaps and coping methods. To understand the special problems before planning any rehabilitation programmes a few illustrations are given as under:

A large number of the poor are able bodied persons. They do not want charity type of services or temporary relief. They look for avenues which help them to overcome poverty. They need jobs, want their basic needs to be satisfied and are concerned about their children's education and welfare. Investment in them is likely to be fruitful.

Several self-employed poor possess specialised skills. They are capable of producing certain consumer goods which have market. Some self-employed have acquired technique of selling goods and services. Such groups can overcome their poverty if they get some help. They need to be provided with adequate financial resources, facilities for producing better quality of goods and services, and guidance.

Some of the houseless "less poor" want shelter more urgently than employment. Although their income is irregular, on certain occasions they earn large sums of money which can be deposited in a bank. By and large, they do not have saving habits. Even if they desire to save, they cannot open an account, in any saving bank, because they do not

have a permanent residential address. For the same reason, they do not get a ration card. As a result, they spend more on food and fuel. Given these facilities they may save in course of time enough to buy a hut in a slum. A typical example is of railway porters. In short, the self-employed are the more enterprising ones among the poor. It is easier to rehabilitate them.

Many housed poor are unemployed, some of them have specialised skills and abilities. It is important to know their abilities and plan remedial measures accordingly.

A large number of the houseless are very poor and have temporary jobs. Most of them work on a day-to-day basis. They do not know what work they would get the next day, whether they get any work at all and even if they get some work, they do not know what will be their wages. Although they live on the street, their most important problem is of getting a permanent source of income no matter how meagre it is. They need permanent employment.

SUGGESTIONS FOR REDUCING POVERTY

The problem of poverty may in the long run be solved mainly with extensive economic development and political adjustments within this country. Its total eradication depends upon how useful are the long term measures and how effectively these are implemented. Although comments on long term measures are beyond the scope of this investigation, the following observations emerging out of the study need special mention.

It is generally felt that anti-poverty programmes like Employment Guarantee Scheme and the programme of providing financial assistance through the nationalised banks to the self-employed and needy poor to improve their business, trade or occupation have marginally pushed up a few families from an absolutely low level of living to a slightly high level, with some of them possibly crossing the poverty line. But the general picture of poverty has not changed and is not likely to change with these programmes unless major changes are introduced in the strategy for eradication of poverty.

A major limitation of the existing anti-poverty programmes is that they do not make effective use of the most important resource of the poor, viz., their physical labour which most of them possess. It is important to impress on the poor that if they are to get rid of poverty, they must work in that direction. The government and other welfare organisations can only provide an opportunity to work and help them. The existing attitudes, values and motivations of the poor need to be changed in the right direction. They need a special kind of education. For example, to solve the problem of housing the poor, the

government can provide the necessary physical infrastructure and basic material. The poor can build their houses with their own labour. It is important to note that eradication of mass poverty presumes a tremendous amount of local participation. These are not the things that can be delivered simply through a facility.

It is extremely difficult to rehabilitate the destitutes and physically and mentally handicapped poor. Many of them lack the drive and incentive necessary to overcome poverty. They feel apathetic and helpless. Counselling has to form a part of such rehabilitation.

Reducing poverty in any significant degree means ensuring that all different segments of the population have adequate access to food, shelter, clothing, health and education. Creating employment for all is an important first step. But employment is not enough. Even those who have employment and income can still be 'poor' in respect of many of the essentials of life. What is important is that intervention should occur simultaneously on all fronts with programmes complementing one another. That is, the target group should be provided with all the basic requirements. Providing only medical facilities or shelter may prove counter-productive. The new approach recommended is a coherent overall policy of rehabilitation of a group in which action on behalf of the poverty groups leads to continuing and mutually reinforcing processes of increasing productive employment, income and so on.

The poor cannot make use of the facilities just because they are there. Providing schools and hospitals in the vicinity does not make the poor utilise these facilities. In fact, studies have shown that these facilities really serve the not so-poor and even rich. What is worth noting is that the facilities may be there, but access to them is denied by the very condition of the poor. For example, the poor may be suffering from some diseases that are not even properly diagnosed. They cannot afford the loss of income that goes with hospitalization. They may not afford the transport cost or the cost of drugs. The ability of the poor to utilise the facilities depends on their income, their social circumstances as well as their motivation. Any strategy involving the one without the other will not help the poor.

Improving the lot of the poor should aim at improving the efficiency of the poor and simultaneously improving the environment in which the poor live. They mutually reinforce and ultimately lead to a more efficient method of poverty eradication.

Both the poor and non-poor view education as a means of uplifting the disadvantaged and of helping them escape poverty. A major problem the poor face is that their children rarely go to school regularly. Many children cannot go to school because they earn their living. Even those who manage to send their children to school feel that the children do not have an opportunity to learn to take initiative, to be motivated

toward future goals and toward status through achievement. The parents themselves have never learned such kinds of motivation. It is important to evolve strategies to help the parents to help their children to overcome isolation and degradation. The poor do not really have equal educational opportunities because of the inferior quality of schools in disadvantaged areas and because of handicaps inherent in coming from a socially and culturally deprived home environment. For example, a large number of poor live in slums. When they send their children to schools, it is invariably to an ill-equipped school. In fact, special educational programmes are necessary for making the poor children vocationally competent. The point to be appreciated is that education in the sense of reading, writing, arithmetic is by itself not adequate for the poor to escape poverty. A special kind of technical, semi-technical and vocational education is essential. The Municipal Corporation of Greater Bombay or voluntary organisations can do something in the matter.

If poverty is to be eradicated, the programme has to be planned in such a way that the mass of the affected population actively participates in the formulation and implementation of policies.

The poor should be encouraged to acquire the appropriate motivational patterns, attitudes and behaviour, concerning work and basic educational skills. Self-help projects initiated by the poor themselves are much more likely to lead to a positive change in self-image than projects initiated by others.

Charity, kindness or threat of punishment may not take us very far. Self-help programmes need to be introduced on large scale. The value of self-help programmes as a means of producing individual and social change is yet to be appreciated by all concerned. The anti-poverty programme needs to be modified.

If the strategy of total eradication of poverty has failed, it is not because the poor are an inferior group. The poor in India are like the non-poor, socially and also culturally. Much of poverty arises from lack of opportunities to earn a living through productive work and the failure to create such opportunities by increasing labour intensive production, especially in small scale units.

It is important to concentrate on the effective utilisation of the existing resources. There are a number of public and private organisations which offer help to the poorer sections of the society. Some of the very poor, for instance, do not know how to use the municipal health and educational facilities including free maternity facilities, vaccination, inoculation, family planning facilities, etc. The poor need to be educated about how to use the free facilities meant for them. That is, eradication of poverty must start from the more effective use of the existing facilities.

SOME CONCRETE MEASURES FOR HELPING THE POOR IN BOMBAY

The Municipal Corporation of Greater Bombay can provide immediately the basic civic amenities—water, sanitation, electricity, roads, etc., to all the poor either free to start with or on nominal charges. If the underground sewerage is not possible, it can at least provide pit latrines wherever possible (for instance, in Dharavi area). Additionally, the Corporation can extend the vaccination and inoculation facilities to all the poor including the houseless. A large number of them have already been covered. However, some pavement dwellers, particularly the new migrants and children need to be provided with these basic facilities.

It is important to provide ration cards to all the poor families. Some political parties and social workers have been helping the poor, particularly the shelterless population in getting a ration card. The Corporation can also play an important role.

It is important to provide primary school facilities in each locality and ensure that the poor children of the neighbourhood attend school.

Conduct surveys to find out the existing skills and occupations in the poor neighbourhood. There may be some artisans—cobblers, carpenters, blacksmiths, embroiderers, leather and rexine bag makers and others. Some of them can be helped to earn more. Similarly it is possible to come across some poor children who have acquired special skills. It is important to explore the possibility of helping them. Children of the poor families may be given specialised vocational training.

Certain small scale or cottage industries can be started to provide work to the unemployed and underemployed women and housewives.

Any temporary relief is likely to be counter-productive. Therefore, it is important to concentrate on providing long-term assistance to the poor to enable them to become self-reliant and self-supporting.

Many able-bodied poor have learnt to demand and receive aid without much efforts at being self-reliant. Unless this is stopped, no community development programme is likely to succeed. The concerned people must tell the poor that in order to overcome poverty, the poor must not only work, they must work harder than the rich.

To eradicate poverty, the poor must be provided simultaneously with work, house, education and guidance. □

Understanding Community Initiatives in Low-Income Urban Areas— An Overview

CHETAN VAIDYA

PROVISION OF adequate shelter and services to low-income households is a major urban problem in India. Now, it has been recognised that the government should refrain from providing packaged housing and act as a facilitator.¹ In its new role, the public agencies are supposed to provide serviced plots, land tenure, public services, etc., and the beneficiaries are expected to construct/improve their shelter under self-help approach. However, experience of this approach in Madras and elsewhere has shown that mere provision of land tenure and services does not enable these households to improve their living conditions.²

In order to achieve significant improvements, the public sector and private sector must cooperate as neither can be expected to succeed in isolation.³ This calls for understanding present process of community initiative in low-income areas and then develop support programmes.⁴ In this, perspective, some case studies in low-income urban areas of Madras, Surat and Baroda have been presented.

PROFILE OF SELECTED CENTRES

Madras

Madras Metropolitan Area (MMA) had a population of about four million in 1981. Annual growth rate of population during 1971-81 was three per cent. It is the fourth largest urban area in the country. Situated

¹India (Ministry of Urban Development), *Draft National Housing Policy*, Ministry of Urban Development, Government of India, 1987.

²Mike Slingsbey, "Community Development Support Programme for Housing Projects—A Problem Solving Approach," *Habitat International*, Vol. 10, No. 3, 1986.

³R. La Nier, C.A. Oman and S. Reeve, "Encouraging Private Initiative", US Aid, 1987.

⁴J.W. Fay, "Public Sector Urban Service Delivery" presented at *Seminar on Public and Private Innovation for Urban Service Delivery*, Washington DC, July 1987.

in Tamil Nadu state housing situation in this urban centre is far from satisfactory. About one-third of the population are living in slums.

A shelter programme was initiated in MMA in 1977 as part of the World Bank assisted Madras Urban Development Project. Slum Upgradation component of the project covered a total number of 38,000 households distributed over 226 improved settlements. As many as, 28,000 households have received Home Improvement Loan Assistance during 1977-86. In addition, 16,000 serviced sites have been allotted to the households as part of Sites and Services component of the programme.

Despite many operational problems, Madras shelter programme has demonstrated that it is one of the viable approaches for improving living conditions of the low-income households.

Baroda and Surat

There are two medium-sized urban centres situated in Gujarat state. Baroda and Surat had a population of 0.73 and 0.78 million in 1981 respectively. Annual growth rate of population in the two centres during 1971-81 was very high (about 6%). Proportion of population living in slums of Baroda and Surat is estimated to be 13 per cent and 22 per cent respectively.

In the context of deteriorating housing conditions in the two cities, a shelter programme has been undertaken as part of Gujarat Urban Development Project. It was initiated very recently. It will be interesting to study success of this programme in these two secondary cities.

Given this profile, some case studies on private initiatives in low-income areas is given below.

CASE STUDIES

Shelter Improvement Through Cooperation of Local Community Organisation and Public Agency—Madras

A Mass Housing Programme is being implemented in Tamil Nadu state. A housing grant scheme has been implemented in Madras through Tamil Nadu Slum Clearance Board (TNSCB). As part of this scheme, an amount up to Rs. 1,500 per household is disbursed as grant to improve shelter conditions.

One of the major problems of the scheme is that the grant amount is not paid in advance. Households are expected to engage an approved Contractor. He improves/constructs the house, with his own investment. TNSCB's technical staff approves the housing improvement and then reimburses the contractor through the household. As expected, the quality of workmanship and material is generally not good in this process.

However, households of Indira Nagar slum have found an innovative method to solve this problem. They have successfully utilised this grant by combining resources of the local community organisation with support of the public agency.

At present, 320 households are living in this slum. It is a recent slum. It was established in 1980-81 on public land. Since establishment of the settlement, households have formed a local community organisation. Members of this organisation pay a sum of Rs. two as monthly fee. During last seven years, a total sum of Rs. 10,000 was collected. This fund was used as initial capital to purchase materials for the shelter scheme. As this amount was not sufficient, an additional loan of Rs. 14,000 was raised from private sources.

This fund was used to purchase materials in bulk for the roof. Households were provided with finished wooden truss, base and tiles. Semi-skilled and unskilled workers living in the area provided free labour for construction of the roof. Labour cost of any additional construction of walls or flooring was paid by the individual households.

Payments to the households for improving the shelter were disbursed by TNSCB 10 to 15 days after completion. The households in turn repaid the organisation. Savings as a result of bulk purchase of material was deposited with the community fund. The local organisation has now undertaken construction of a Community Hall with this common fund. It will be utilised for organising marriages and other functions. Cost of the hall will be recovered through rent on daily basis.

Thus the low-income households have harnessed limited available resources to improve their living conditions. Officials of TNSCB have also played an important role in this approach.

Indigenous Method of Delivering Water Supply⁵

Water supply is one of the basic services provided as part of Madras Slum Improvement Programme (SIP). It has also been identified as the most important service by the slum dwellers. Though public stand posts have been installed in improved slums, they do not have sufficient supply of water. Many households have to depend upon water tanks provided by the Metropolitan Water Supply Board (MWSB). These water tanks are filled up daily by mobile van (truck) of the Board.

Distribution of water through storage tanks creates many problems such as irregular supply of water by the Board workers, wastage during collection and quarrels among the households. Household in Thiruvalluvar Nagar slum in Madras have found out an indigenous method of

⁵Operation Research Group, *Study on Home Improvement Loan Scheme—Madras*, ORG, 1987.

delivering water through these tanks. Various neighbourhoods (30 to 40 households each) of the slum have made one person as in-charge of MWSB water tank. It is kept outside the house of this person.

Distribution of water through the tank is supervised by this person. He gives only a certain number of pots per household. He also collects ten paise per pot of water from the slum dwellers. He is responsible for paying Rs. eight per trip to the Board workers as an incentive to bring water regularly to the slum. For this service this person is allowed to collect water free from the tank for his household's use. In addition, this role gives him a considerable respect and recognition among the community.

This method is simple, equitable and efficient. Though, it is generally, believed that low-income households do not like to pay for the water supply, in this case they do pay for the service.

Institutional Vs Private Sources of Finance

Improvement of shelter conditions is one of the objectives of the Slum Improvement Programme in Madras which was initiated in the year 1977. This approach includes legalisation of land tenure and provision of public services in the low-income areas. As finance was recognised as one of the constraints for shelter activities, a Home Improvement Loan (HIL) scheme was introduced as part of this programme in 1982. A loan amount up to Rs. 3,500 is disbursed in two or three instalments.

A total number of 28,000 households have been assisted under the HIL scheme during 1982-86. This is one of the largest institutional housing finance schemes for urban low-income households in country. However, implementation of the scheme has faced many problems. Non-availment of second and third instalments of the assistance has been identified as a major problem.

In this context, Madras Metropolitan Development Authority (MMDA) has sponsored a study of HIL scheme. It reveals that provision of land tenure has encouraged households to invest in housing. The major source of finance is saving (47%) which could also be due to additional income in form of rentals. The other major service being money lender (19%). This is a cyclic or continuous process. HIL's contribution to total investment is only 15 per cent. It has played a limited role in total shelter improvement process. The basic problem with HIL is non-availment of the subsequent instalments. Major reasons identified are additional cost, delay in disbursement, deduction and inadequate income.

Informal Credit System

It is interesting to note that an informal credit and collection system has been observed in some slums of Madras. In this system, one cut-

piece agent sells cloth on monthly credit basis. He visits the slum households everyday on cycle and collects Re. one per day. The slum dwellers are expected to pay this instalment about three to four days in a week. Amount of credit extended to an individual slum dweller mainly depends upon past repayments made by the households. This agent also provides a small diary to the beneficiary household for keeping the account.

Housing finance is also provided by small material suppliers situated near the slums to the households. Credit equal to half the amount of material is given to the household. He is expected to repay within six months. There are no fixed monthly instalments. The cut-piece agent as well as the small material suppliers are visiting or observing the slum dwellers almost everyday. Therefore, they find it inconvenient and cost-effective to collect their repayments.

Thus, once a public sector programme of provision of land tenure, has been implemented, households have mobilised saving and private sources of finance for housing improvement.

Role of Community Organisations and Public Interventions

In initial phases of consolidation, the local community organisations (Sangams) have played an important role in slums of Madras. In Azeez Nagar slum, the community jointly raised level of land, laid roads and maintained whatever services were available. The average contribution was Rs. 500 spread over six years. In Azad Nagar slum, in addition to maintaining infrastructure like roads and street lighting, the households jointly maintained three wooden bridges. They also contributed for a legal battle over ownership of land which lasted for ten years.

As part of Slum Improvement Programme, individual lease-cum-sale (LCS) agreements have been signed between individual households and the public agency. Since the programme and execution of individual LCS between the slum dwellers and agency, Sangams have stopped playing an active role in improvement of local conditions. Their role in HIL was limited to filling up forms and accompanying household heads to get loans. The leaders feel that capabilities of local organisation, have not been utilised in the slum improvement programme. The call for contributions to maintenance has had no response as the people feel that it is the function of the agency to maintain services. As such the community organisations have split seeking protection from political parties, functioning for different political and economic interests. Currently these Sangams have been reduced to agencies lobbying between agencies and households in problems related to execution of LCS and HIL.

It is felt that the SIP would have been more successful if the local community organisations were involved in planning, execution, and

maintenance of the programme. In addition, this programme, as implemented, has perhaps, destroyed the inherent strength and initiatives of the community organisations rather than encouraging it.

Construction of Drainage by Low-Income Households

Lack of adequate drainage system is one of the reasons for poor environmental conditions in low-income areas. This system could be constructed through local community organisations. Major problems for this are that: (a) the conventional drainage system is expensive, (b) it is not flexible, and (c) people do not trust each other. As part of Orangi Pilot Project in Karachi, neighbourhood level local organisations have been formed to implement low-cost sanitation systems.⁶ One experiment of construction of drainage system by people themselves has been observed in a low-income area of Surat.⁷

Some of the households of Mann Darwaja Slum of Surat felt the need for drainage facility. The urban local body did not construct it for them in spite of many representations. Therefore, it was decided to construct the drainage line on their own. However, it was not possible to collect charges from different households and employ a common contractor. So, it was also decided that each of the households would construct drainage line in front of their own house. One household bought new drainage pipes, some used old pipes from local material supplier and a few managed to obtain it 'free' from a nearby construction site. The drainage line was constructed in this manner and it is maintained properly by the households.

Thus, the low-income households have been able to find a novel method of helping themselves.

Baroda Citizens Council (BCC)⁸

This is a voluntary body engaged in improving quality of life in Baroda city. Major objectives of the Council are to identify socio-economic and civil problems of the city and encourage various groups to solve these problems. It also provides a platform for cooperation among voluntary groups, local body and the industry sector of Baroda.

This Council was formed, as an advisory body of citizens for Baroda Community Development Service launched in 1965. This Council, in addition, to its advisory role, took responsibility of conducting various

⁶A. Hasan and C. Vaidya, "Two Approaches to Improvement of Low-Income Urban Areas—Orangi and Madras", *Habitat International*, Vol. 10, No. 3, 1986.

⁷Operations Research Group, *Surat Slum Upgradation Scheme*, ORG, 1985.

⁸C. Vaidya and A.K. Tamang, "Baroda Citizens Council—An Overview" Submitted to *Second National Consultation of Organisations Working for the Urban Poor*, May 1987, Madras; and *Annual Report*, 1986, Baroda Citizens Council.

programmes. It is, now, one of the foremost voluntary organisations in the country working at city level to meet major community needs of the people.

It has about fifty regular staff members. This includes an Executive Director, seven professionals and 33 field workers. Professionals working in the fields of finance, health, environment and related areas help the council as members of various advisory committees.

Major sources of finance of BCC are non-governmental agencies (55%) and industries (15%). Baroda Municipal Corporation, State/Central Government and Beneficiaries contribute about 10 per cent each to total income of the council.

Community Development

BCC has adopted an integrated community development approach with participation of beneficiaries covering a package of inputs like Health, Economic Welfare, Non-formal Education, Environmental Improvements and Development of Local Leadership. At present it is working in 44 slums of Baroda having health and education services covering 7,000 families. Non-formal education is carried out through pre-schools.

Economic Welfare

These activities are carried out through skill development, programmes, loan assistance for unemployed, promotion of savings groups, supplementary income for women and procurement of ration cards. Youths of the urban are trained under evening courses conducted with the help of technical institutes for turner, fitter, electrician, TV technician, auto-mechanic, radio repairer, etc. Savings groups have also been formed in 19 slums.

Health

The health programme focuses upon preventive measures, health education, utilisation of existing services and establishment of needed services. In collaboration with Baroda Municipal Corporation and 12 other voluntary agencies, the council undertook a city wide immunisation programme in 1986. It happened to be the first such programme in the country. In addition, an environmental improvement scheme has also been undertaken. This includes construction of low-cost toilets, provision of India Mark II hand pumps and construction of drainage on cost sharing basis.

Childhood Disability Project

This project was undertaken in 1986 with assistance from UNICEF. It aimed at identification of disabled children (0-15 years) in the slum

of Baroda. It includes their medical and educational rehabilitation as well as coordination of services for the disabled persons. An orientation scheme for school teachers regarding various aspects of disability was also carried out. BCC organised a quarterly meeting of community leaders from its slum areas to educate them regarding prevention and management of disability.

Thus BCC is an illustration of cooperation between professionals, industrialists, local body and government to improve quality of life in urban areas.

CONCLUSIONS

The basic objective of the article is to provide some background material to generate interest in this important subject. These are six *ad hoc* case studies of community initiatives in provision of shelter and infrastructure in low-income urban areas. It is needless to add that there are many more such novel experiments taking place in different parts of the country. It is necessary to document and understand these processes to develop more realistic policies for involvement of private sector in urban development.

Though, it is difficult to draw any general conclusion based on the *ad hoc* case studies, some observations are given below:

- (a) Low-income households are capable of helping themselves for provision of shelter and low-cost infrastructure given certain positive support from public agencies.
- (b) Unrealistic public interventions can do more harm to inherent strengths of the low-income communities rather than encourage them.
- (c) Structural changes will be needed in the role of public agencies to really encourage private initiatives in this sector. ☐

An Alternative to Squatter Settlements

S.K. SHARMA

NOTWITHSTANDING THE various strategies adopted and initiatives taken for housing the poor, squatter settlements in the urban centres continue to mushroom. The present shelter strategies have thus failed to reach the poor who resolve their shelter problem by squatting on public lands. It is, therefore, essential that we take a fresh look at the present shelter strategies and investigate what new directions may be taken.

The initial efforts to resolve the housing problems of the poor were through provision of built EWS houses. The State Housing Agencies formulated schemes for construction of EWS houses with HUDCO assistance. They, by and large, complained about the unrealistically low HUDCO ceiling costs and often ran into cost overruns resulting in recategorisation of the HUDCO loan. The actual number of houses built fell far short of the needs of the poor and failed to reach the poorest amongst them. Generally the cost and the house provided did not suit the life style of the poor.

To overcome these difficulties, the strategy shifted to the sites and services programme. It was felt that the poor can build houses more suited to them and at much lower cost, if sites for construction were provided to them. The sites were provided with basic services, i.e., approach, water, electricity, drainage and sanitation. This programme met with mixed success. The serviced sites on the periphery of the towns costing four to five thousand rupees were considered unsuitable as well as expensive by the poor. They also could not relate themselves to long repayment schedules just for the land, more so since the beneficiaries had to invest on house construction for which they had no resources.

Recently, HUDCO has been laying great emphasis on sites and services backed by cash loans. This is based on the logic that if a loan is provided for house construction, the poor will be able to build an appropriate shelter on the sites allotted to them. Since they would now have a house to live in, they would be willing to pay the instalments of the

cost of the site and the cash loan. This combination of serviced sites and cash loans for house construction is not a new concept. It has already been successfully tried out in various places. Many State Housing Agencies are now proposing such schemes. Those agencies with dominant construction wings are, however, sticking to the built house concept.

The question that arises is whether any of the strategies outlined above can meet the shelter needs of the poor and if so, whether they will control the growth of squatter settlements. The answer to this question is clearly NO. These strategies may be able to provide a limited solution to persons who have acquired some social and economic stability but are hardly likely to reach the new migrants who can afford a shelter costing at best a few hundred rupees. A solution for curbing the growth of squatter settlements will therefore have to be found elsewhere.

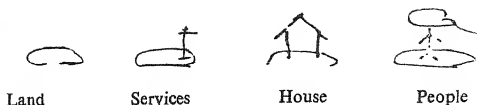
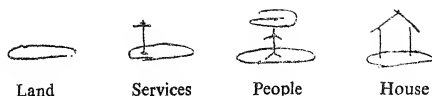
The sites and services programme is an improvement on the built house programme but it still suffers from the defect that it is a projected package with a definite starting and definite completion time. The delivery period is usually two to four years, which is unsuited to meet immediate needs. Moreover, the formal registration process and long waiting period go contrary to the spontaneity of the needs of the poor. What the poor need is a sequence of development which matches with their needs.

SEQUENCE OF DEVELOPMENT

It needs to be emphasised that, when we address 'housing' we are dealing with continuing and ever changing processes, and not just with projects that have distinct starting and finishing points. In relatively rich societies housing is now supplied as a product, lately even with furniture and fitted kitchens. For poor communities, housing is still a process wherein the services, community facilities and shelter itself gradually improve with social and economic stability and development. Housing as a product is therefore totally unsuited to their needs. It seems that the sequence of housing development visualised even in the sites and services programme does not relate to their needs. This point requires greater elucidation.

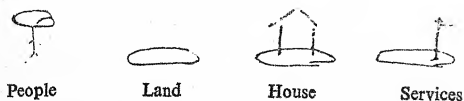
In the built houses the approach to the sequence of development is land, services, shelter and people. The people come last and have no choice in determining the site, the level of services and the type of shelter. The programme is totally alien to their needs and life style.

Furthermore, it has no relationship with what they can afford. The order of development in the sites and services programme is sites, services, people and shelter. Here, the people have been brought in the

I Built House*II Sites and Services*

housing process before the shelter is built and to that extent they have a choice in the type of shelter they can make at a cost which they can bear. The site as well as the services, however, get determined before the people move in. They thus have no choice in the location and the type and level of services they need and can afford. The sites usually of the same size in straight rows also do not suit their personal and community needs.

The order of development in squatter settlements is just reverse. It is people, sites, shelter and then services. In this the people have first selected a site which meets their social and economic needs, built shelters and then waited for the services to move in over a period of time. These settlements fulfil the needs of poor in a logical sequence suited to their needs. The people are involved at all levels of decision making on where and how they would live. The squatter settlements thus, clearly fully match the needs and aspirations of the poor and, in that sense, are the most successful settlements.

III Slums

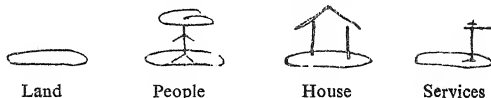
However, they do not comply with the city planning regulations. Moreover, the cost to the State and the city in regularizing these settlements without getting any value for the land or services is substantial. It seems unlikely that the State will ever be able to catch up with

providing satisfactory services in the squatter settlements. It also seems illogical that we should first allow people to squat and then find methods to legitimize the settlements. If we have any pretention of resolving the problem we will have to research for a solution very close to the order of development in the squatter settlements which matches the needs and life style of the poor.

PLANNED UPGRADABLE SITES

The next best order of development which would meet the needs of the poor would be land, people, shelter and services. Simply put, this means that the poor would be offered a site with no services excepting possibly access to the site and drinking water as per rural standards. The sites could be given to them on temporary licence and annual rental of say Rs. 200 to Rs. 500 payable in advance. A licenced allottee would lose his site if he did not construct his shelter within a few months and actually occupied it.

IV Planned Upgradable Sites



Over a period of time he would be provided other services and finally, say after five years, given a permanent lease for which he again would have to pay a certain amount as lease money for the serviced site based on the cost of land and services. Long term HUDCO loan could be provided to him for the lease money and shelter improvement cost.

There can be various reservations regarding this approach. The first major objection would be that providing sites without services, particularly sanitation, cannot be accepted as a policy. The answer to this is that if such unserviced sites are not provided, the poor will squat on sites with no services and the sanitation of the city would in any case deteriorate. On the other hand, the advantage is that by providing sites in a planned manner, it would be easier and more economical to provide services at a later date, and the settlement would be better organized than a squatter settlement.

The second objection could be that by providing such sites migration into the cities would be further encouraged. Migration of the poor into the cities is for economic opportunities and has a certain relationship with the size of the city, type of economic activity, etc. Merely organizing upgradable sites cannot lead to additional migrants moving into

the cities. A rudimentary survey would indicate the level of influx of migrants in the previous years. If unserviced sites equivalent to or slightly less than the average annual influx in the previous years are provided through the legal process, squatting on public lands can be firmly controlled by offering alternative sites. It may thus be possible to eliminate squatting or at least effectively control it.

A third objection against the approach of planned upgradable sites could be that it will be difficult to provide land at such a large scale. While this can be a genuine difficulty, it must be realized that the poor people do find land for themselves leading to unplanned squatter settlements. The government must, in the interest of the city as well as the poor, control this process by giving legal access to land to the poor.

The cost of squatting to the individual as well as State and the city, is high. The squatter, under perpetual threat of eviction, has to make regular payments to slum lords, police and city officials. He is also, on account of uncertainty of tenure, unable to make permanent improvements in his shelter, nor is he entitled to institutional finance. The State does not get any value for the land squatted upon nor for the services provided later. Through a process of giving licences for unserviced sites latter upgraded into leases, the pay-offs to slum lords can be eliminated and the State can hope to recover at least part of the costs through small payments over a period of time.

The approach advocated above is not a new one. The concept of providing "hutting grounds" in the Municipal Acts of India is at least 40 to 50 years old. Professionals too have been talking about it since long. John Turner, a well known housing expert, in his article "Future Directions in Housing Policies" presented in an International Symposium in 1985, strongly advocated such an approach as being the only expedient method of integrating the poor in the growth of the cities. In Pakistan, such a programme has been successfully implemented. The concept of land bank for the shelterless advocated by HUDCO has the same spirit. The Institute for Housing Studies, Rotterdam and HUDCO's Human Settlement Management Institute strongly support this approach.

IMPLEMENTATION ISSUES

If this approach is accepted at the policy level, it will require far reaching changes in institutional culture and implementation strategies. The State will have to evolve suitable procedures of licences and annual rentals for planned upgradable sites. The Housing Agencies will have to earmark substantial portions of their lands for licencing in the form of planned upgradable sites. Since the initial cost of such sites will be small, the resource allocation of HUDCO for the weaker sections will

have to be utilized in slum upgradation, shelter improvement and basic sanitation which will be a valid approach properly 'queuing' the improvement of the settlements and organizing their development in a proper hierarchy. An allocation of about 30 per cent of all land under development, for planned upgradable sites for the weaker sections will have to be imposed on housing and urban development agencies. It is about time that an effective alternative to unplanned squatting of our cities is evolved in the interest of the State, the city, the economy and the poor. □

Health Care to Urban Poor: Case of Bapu Nagar Slum

A. MALLA REDDY*

HEALTH ADMINISTRATION is most important segment of nation building. The public health is the foundation upon which reposes the happiness of the people and also the prosperity of the nation. The term health is derived from an Anglo Saxon word 'health' meaning the condition of being safe and sound or whole. The World Health Organisation defined Health "as state of complete physical, mental and social-well being and not merely the absence of disease or infirmity". Health is the most important component of human life. It is this component that determines the human satisfaction. Health is the quality resulting from the total functioning of the individual, that empowers him to achieve a personally satisfying and socially useful life.¹ To the person who has lost his health, it is the most priceless possession of all. To quote an old Arabian proverb, he who has health has hope, he who has hope has everything.²

THE URBAN POOR

The review of the Indian situation reveals a contrasting picture. The population in India is growing alarmingly, the urban population is growing much more alarmingly. The National Commission on Urbanisation has highlighted the fact that the urban population has quadrupled from 50 million in 1947 to over 200 million in 1988. In just 13 years, i.e., 2001, it is expected to reach 350 million. The major reason for concern is that large proportion of the population are living below the poverty line, though this is more in rural areas. The urban areas also bear considerable proportion. It is estimated that in rural areas 40.4

*I am grateful to the Director, Prof. Ravindra Prasad for his valuable advice in finalising the article.

¹E.B. Johns, W.C. Sultan, L.B. Welgter's, *Health for Effective Living*, New York, McGraw-Hill Book Company, 1984, p. 5.

²*Ibid.*, p. 5.

per cent and in urban areas 28.1 per cent of population are reported to be living below the poverty line.³ The unemployed in the rural sector are moving into the urban sectors to find new opportunities. Consequently, the problems of urban areas are much more magnifying.

The poorer sections living below the poverty line in the urban areas are concentrating in slum areas. The slums are over-crowded with inhabitants. They do not have the necessary civic infrastructure. Absence of public health measures are leading to insanitation. The slum dwellers are living under terrible pressure with stress and strain. One of the prerequisites for attaining better health is the environment or the surrounding in which we live. Life in cities appears as both unhealthy and constraining "To-day the environment influences man much more than man influences the environment".⁴ The environment in these slum areas is polluted. It is not conducive to human inhabitation, and continuous stay in these slums areas has ill effects on health. Congestion, lack of ventilation and lack of basic amenities in the houses are the ideal situation for the spread of communicable diseases. Dirty environment usually seen in city slums is a major cause for epidemics in slums.⁵ The epidemics in slums can spread throughout the city like wildfire.

The poverty is the main hindrance in the process of development of urban poor. The poverty alleviation programmes taken up by the government are yet to reach many of the urban poor. Poverty is still the biggest cause of ill health; poverty in all its shapes and forms, remains the fundamental health problem of the whole world.⁶ The urban way of life is always associated with illness and its influence is always undesirable. The existing pressures on urban dwellers lives contribute to the development of chronic diseases.

HEALTH SERVICES

Mass Health and Hygiene programmes have no real place in the social economy of the country. Only when epidemics threatened the country to annihilate entire community did the authorities bestir themselves into hastic action.⁷ We have made many gains but have lost the lessons of

³India, Planning Commission, *Seventh Five Year Plan, 1985-90*, Vol. I, Government of India, 1985, p. 4.

⁴Clandine Herzlich, *Health and Illness: A Social Psychological Analysis* European, Association of Experimental Social Psychology, London and New York, Academic Press, 1973, p. 29.

⁵C.A.K. Yesudian, *Health Services Utilisation in Urban India*, Delhi, Mittal Publications, 1988, p. 130.

⁶Peter 'O' Neill, *Health Crisis 2000*, Published for the World Health Organisation, Regional Office for Europe, Copenhagen, 1983, p. 12.

⁷G. Borker, *Health in Independent India*, Ministry of Health, New Delhi, Government of India, 1957, p. 5.

centuries. Health has been misunderstood as a matter of hospital based treatment. The government planned to provide health services to the people by engaging doctors and hospitals. Fortunately, the urban areas have facilities to the extent of 70 per cent of the total hospital beds and 80 per cent of the doctors in the country. In practice, the government is not concentrating on the health services at the community level. There is no match between the type of services available and the type of services needed.

High prevalence of mortality and morbidity in India is due to lack of health education and medical facilities in reach of the poorer sections of the community in rural areas as well as in urban areas. We must recognise the fact that the major health problems and the premature deaths are preventable through changes in human behaviour. We have the know-how and technology but they have to be transformed into effective action at the community level. Parents and families, properly supported, could save two-thirds of the 14 million children who die every year if only they were properly informed. Immunization alone could have saved three million lives and another three million deaths a year could be prevented by oral rehydration—a simple and cheap technology.⁸

The Municipal Corporation of Hyderabad has taken up Hyderabad Slum Improvement Programme (HSIP) in which health is one of the components and under this component 20 medical teams are established to cover the primary health needs of the dwellers in selected slum areas. This article highlights the unique system evolved in caring the health for urban poor slum communities, and the efforts made by the medical team in the Bapu Nagar slum.

Primary Health Care

Health is primarily a matter of self-care. There is need for inculcating a philosophy of primary health care among the communities especially the weaker sections. The concept of primary health care in the urban centres of India has received the least emphasis. The value of primary health care was ignored which could have kept many people out of hospitals and prevented many deaths. Today even simple diseases among the urban poor are causing major damages for lack of primary health care system at the community level.

However, though all the varieties of health services are available in our cities, not all the sections of the community are benefited by these facilities. There is a wide gap in the utilisation of health services between the various sections.⁹ The people living in urban slums are

⁸UNICEF, *The State of World Children*, 1989, p. 5.

⁹C.A.K. Yesudian, *op. cit.*, p. 1.

deprived of the benefits that the modern medicine can confer mostly because of lack of affordability. There is need for primary health care system at the community level. To provide equal access to appropriate health care, community-based health systems should be developed. Primary health care should then be a central function, backed by the hospital services including facilities for referral of patients to more specialised institutions and for supervision, guidance and logistical support.¹⁰

We need the skill of a doctor, to detect the health problems at an early stage and to effect the health education to the people. The family is perhaps the most powerful educational element in the society because it is the primary concern of it to look after its members. By tackling the weaker section families, the main sufferers in the society can be given appropriate relief.

Health Services in Hyderabad

The Government of Andhra Pradesh has given considerable priority to the administration of health and medical services. Hyderabad, being the capital city of Andhra Pradesh, has several important hospitals dealing with general and specialised services. The Osmania General Hospital and the Gandhi General Hospital are the two main hospitals dealing with large scale patients. Apart from them, several government hospitals dealing with specific subjects like Family Planning, Orthopaedics, heart diseases, mental diseases, dental problems, TB, Leprosy, tropical diseases, etc. In addition to these hospitals, the government has established 34 primary health centres to cater to 50,000 population, from each centre. In addition to them, several hospitals are in operation dealing with health subjects of government employees and industrial workers, and other service sectors. The government programmes covered a large scale campaign of the family welfare activities at the fields level. With this network of services, government is not able to reach the poorer sections living in the slum localities. In fact this problem is not figuring in Hyderabad alone, it has been faced by every city in the country.

The primary health centre alone can fill the gap prevailing between the hospitals and the urban poor community. If the diseases are not attended to in the preliminary stage they shall prove to be fatal. Health centres are necessary to reach people to impart necessary inputs to improve their quality of life.

Specific efforts in this regard are made in Hyderabad. The Corporation of Hyderabad has experienced reaching the people with the activities of Mother and Child care programmes sponsored by the UNICEF. These programmes have assumed great importance among the slum community.

¹⁰Peter 'O' Neill, *op. cit.*, p. 117.

In continuation of these programmes the health activities are taken up by the Urban Community Development Department of the Municipal Corporation of Hyderabad. A comprehensive slum improvements programme was launched known as Hyderabad Slum Improvement Project (HSIP) (Phase II) with the assistance from the Overseas Development Agency (ODA), the United Kingdom, Government of India and the Government of Andhra Pradesh. The Programme consists of three main components: (a) Environmental Improvements in the slum areas, (b) Socio-economic programmes, and (c) Health Services. In Hyderabad the previous slum improvement programmes had proved that without the health component, slum improvement is not comprehensive. The slums selected in the HSIP Phase II were covered by the Health Programmes. The HSIP Phase II engaged 20 medical teams to deliver primary health services in the selected slums. Bapu Nagar Slum is covered by one of the medical teams. It functions through the health centre established in the slum.

About the Bapu Nagar Slum

Bapu Nagar is one of the localities which is recognised as slum area in Hyderabad city. It is located in Circle five of the Municipal Corporation of Hyderabad. It is situated on the main road in the Sanjeeva Reddy Nagar Area. Originally this area belonged to a private land owner. The construction labour has settled on this land with *kutchas* structures. By the year 1973, some of the *kutchas* structures have become *semi-pacca*, several houses have assembled on this land without any civic amenities. The Municipal Corporation has extended sporadic civic services. In the year 1979 this area was declared as slum area. Subsequently in the year 1986 this slum was selected for improvement under the HSIP Phase II.

This slum has 486 houses. The community belongs to scheduled tribes (Ibada). Density in the locality is high, the houses are congested, and people are mostly illiterates. Income levels of the dwellers are low. Most of them are low paid workers; some of them are low income employees. These dwellers are from the weakest sections of the urban community. They are not able to afford improvements. The community is receiving the welfare measures from the government. Most of the children are attending the school education. The poverty alleviation programmes and job reservation have helped some of the families to improve their standards.

Under the HSIP, Bapu Nagar Slum has received the environmental improvements by providing public water taps, street lights, underground sewer lines, community latrines and community bath rooms, road formation in the main lanes; the narrow lanes are paved with stone slabs.

With these improvements the health hazards prevailing in the slum are minimised.

The dwellers have low social status and their awareness is low. The health education is totally absent. On many occasions they are careless. They neglect even the serious disorder in their health. Their food intakes have low nutrition values and therefore their health standards are lower and have least resistance. They are prone to diseases.

Health Services in Bapu Nagar

The slum is covered under the health programme to provide health care services to improve the health standards of the dwellers. The health inputs started flowing in the Bapu Nagar slum area from December, 1984. In the initial stages it was covered by one of the seven medical teams engaged in the health programme of the HSIP, Phase II. These teams were drawn from the existing health staff in the Municipal Corporation of Hyderabad. The medical team used to visit the slum on the scheduled dates to extend the health services. Immunisation to the children was given a great deal of emphasis. This system continued up to March, 1985 and new medical officers were recruited along with the para medical staff in the month of June, 1985.¹¹ Twenty medical teams consisting of a doctor, Auxilliary Nurse Midwife (ANM) were posted in the slum areas in the month of June, 1985. The doctor and the ANM are engaged on a part-time basis. They are available for three hours daily. They are paid honorarium from the (HSIP) project budget. The seven teams of medical staff already functioning in the field have been withdrawn.¹²

The recruited medical teams were given initial training to orient them with the objectives of the programme. The medical team posted to the Bapu Nagar started work with the door to door campaign and explained the objectives of the health programme to the dwellers. They had to explain their roles to the community in order to convince the community. Several group meetings were held with the target community. The medical team thus, developed the rapport with the community. The dwellers were facing several health problems. Previously the dwellers were not responding to their most severe health problems. The health services were not in their reach.

The entire slum area is surveyed by the medical team to seek the information about the age of the adults, number of children, their age group, their general ailments and their health status. This gives a wide range of information. It has enabled the medical team to know the number of

¹¹Letter No. 469 FW/85, dated 29-5-1985.

¹²The Public Health Wing of Municipal Corporation has withdrawn its Doctors with the Letter No. 518 CFWB/85, dated 10-6-1985.

children below one year and five years. Established in community hall, it has become the base for health activities. It is maintaining the record of the birth and death in the slum. It is following the record to administer the immunisation doses to the children. In the death cases, efforts are made to find out the cause for the death.

As per programme, a community health volunteer (CHV) has been identified from the slum community to act as a liaison between the community and the health centre. The medical team fix the time at a convenient place in the slum, to extend the health services. The community has come forward to avail of the medical services. The health centre has maintained several registers for preserving the data. These are: (1) Family Profile Register, (2) Stock Register, and (3) Out Patient Register. The HSIP Phase II has sanctioned Rs. 9,000 to each centre towards furniture.

Frequent meetings are held with the medical team and the programme officers of the HSIP to fix up targets, the family profile compiled in the survey is utilised in attaining full coverage. Health cards are supplied to the children at the time of immunisation. An out-patient register is maintained and daily entries of patients attending the health centre are made along with the name, ailment, etc.

The health centre has become the base for extending the health services to the target slum community. The health centre is well geared to take up immunisation to the children against the six killer diseases: (1) Measles, (2) Tetanus, (3) Whooping cough, (4) Diphtheria, (5) Tuberculosis, and (6) Polio. This exercise has attained considerable significance. Even the rare vaccine is readily available in the cold storage at the health centre. Most of the cases covered by the health centre are general ailments, fever, upper respiratory track infection, child care, immunisation doses to the children, post natal care, etc. It is identifying the disabled children, physically handicapped and refering the treatment to the specialised hospitals. The target population attached to the health centre is covered by these activities. Apart from their attendance in the immunisation and health education programmes, every month 500 to 600 patients are attending the health centre for treatment.

The health centre has given an opportunity to urban poor to visit a doctor and seek his advice whenever necessary. However, in all the major ailments the doctor is advising the patients to visit the specialist doctors, the CHV is guiding them to the specialist doctors. The pregnant women in the community are listed and constant follow up actions are taken up. Necessary guidance and advice is rendered to them in the areas of pre-natal care. After the delivery, proper education is imparted on the post-natal care and child care. Through this effort the uneducated slum dwellers are getting the opportunity to know their health problems and seek solution to overcome them. This kind of facility was totally

absent before the health centre was established at the slum level.

The medical team not only delivers the medicine but also studies the cause of the diseases and explains the patients especially to the mother and child care, the water borne diseases, fever, nutritional deficiencies, etc. In the health education approach, the women are educated to live in clean surrounding, change their unscientific health habits and keep the child in better conditions. Audio visual aids are presented to the community as part of awareness campaign. The health centre has displayed the charts with good signs of health. It is not only curing the diseases but it is also guiding the slum dwellers in improving the quality of life by preventing the diseases. These programmes have generated considerable enthusiasm among the mothers and children to keep clean and tidy and practice better methods in up-keeping their health.

Normally the doctor is available at the health centre but he also visits lanes and by-lanes of the slum area to physically verify the well being of the community. He also holds discussions with community leaders. As per the programme, a community health volunteer is selected from the target community. The CHV acts as the main link between the community and the medical team.

The CHV plays a constructive role in understanding the health problems of the community. He is making efforts to bring the patient to the health centre and seek the medical advice from the doctor. The community informs their needs and wishes to the CHV. The CHV in turn informs the community feelings to the doctor and the ANM. Through this process the community needs are closely watched by the health centre. Appropriate actions are initiated to meet the needs.

The health committee is constituted of seven members of the slum. It is regularly meeting and discussing the problems arising in the day-to-day affairs. The medical team is interacting with the local youth welfare association to seek their cooperation. The doctor of the health centre is attending the monitoring meeting of the Urban Community Development Department at the circle level of the Municipal Corporation of Hyderabad, so that a good rapport is maintained,¹³ among the medical team, UCD and the MCH staff. The doctors of the medical team have developed an action plan, with all proposals to be taken up monthwise as per the priority.

The health centre is monitored by the Programme Officer of HSIP. He is assisted by an Assistant Programme Officer. Both these officers visit the health centre frequently to know the problems faced in the functioning of the health centre, to assess the community needs and to take

¹³Letter No. 741/UCD/C1/85, dated 27.5.1985 inviting the doctor of the concerned slum to attend the circle meeting.

the necessary follow up action. The budget and financial expenditure of health programme is controlled at the programme officer level. These officers collect the indent from the health centre as per the requisitions. The medicine is delivered to the health centre.

The health centre is working as the lower tier in medical services rendered by the government. The health centre is not only making efforts to control the minor ailment of the slum dwellers but also preventing the diseases with an emphasis on the health education to the ignorant patients. It has generated lot of awareness and changed the habits. It has facilitated frequent interaction of the dwellers with the medical team. Follow-up action is easy for the doctor. As envisaged in the HSIP, it is effectively tackling the health deficiencies. The medical team has developed cordial atmosphere. With this it could elicit active participation of the dwellers. They are seeking to understand the root cause of their ailments and are learning to develop better health practices.

The health centre is inculcating the habit of consulting the doctor for their health needs. This is leading to a strong foundation for self care for the health. The community is cooperative. They are responding to the calls given by the doctor. The message is spreading across the slum families. The doctor is motivating eligible family members to undergo Family Planning operations to minimise their family sizes. The serious cases from this slum are recommended to the respective specialised hospitals in the city for follow up action.

Public Health Measures

The health services are provided along with other physical and social components. The Urban Community Development Department of Municipal Corporation has taken up social inputs programmes in this slum to improve the conditions of slum dwellers. The Slum Development Officer (SDO) and the Community Development Officer (CDO) are regularly meeting the dwellers to extend their advise. The Public Health Engineering staff is constantly cleaning and extending the necessary sanitary care in the Bapu Nagar slum. These activities include cleaning the drains, spraying larval oil, dusting DDT fogging and extending regular piped water supply. These measures have brought considerable changes in the environment of the slum. Through these improvements the slum is becoming a better place to live in.

The health centre has provided the following advantages:

1. The physical presence of the centre in the slum has improved health standards of the poor dwellers.
2. Provision of free medicine to urban poor families.

3. Immunisation programme could be effectively covered unlike the national immunisation programmes.
4. Previously the patients from the slum area used to visit a doctor only at serious condition of the patient; now the dwellers are trying to approach the health centre in the initial stage of the ailment.

Limitation

It has attempted to cure only minor ailments, the spectrum of services has not been expanded with budget allotted to the programme. The doctor is prescribing the medicine to the poor patients due to non-availability of rare medicines in the health centre. Some of these patients are not able to purchase the medicines at their cost. Due to shortage of medical personnel (in HSIP) the doctor is given extra duties to cover other slum areas. It is a massive task for the part-time doctor of the HSIP to convince illiterate mothers for accepting and following immunisation schedule. The doctor also feels that he is paid insufficient honorarium.

CONCLUSION

The environment of Bapu Nagar has improved. With these efforts the living conditions are also improved. Previously slums in Hyderabad were not covered by any health programme, therefore the setting up of health centre has proved to be beneficial. The medical team in the Bapu Nagar is rendering services in time to the needy and these efforts are improving the health status of urban poor. On the whole their attitude towards health has changed. The health education imparted to the dwellers has proved to be effective. They are making efforts to prevent many diseases. The health centre has ensured cent per cent coverage of the immunisation to the children in the slum.

With low cost solution, coverage is more and the satisfaction is high. There are several positive signs that the dwellers are actively participating in the process of their health care. The families are adopting birth control measures. Due care is given to the child growth practices, they are protecting the children from the dangerous diseases. The exercise has thus proved to be an appropriate intervention. It is a right combination of men, money and material. It is directly helping the poorest of poor. New life is emerging in the slum with a hope for better future. On the other hand, the number of slums are increasing. Nevertheless there is need for creating more health centres in slums of Hyderabad.

The problem of ill health cannot be tackled by the efforts of the government alone. It should be the concern of the community, non-government agencies, social workers and above all, the commitment of

the medical staff engaged in this service. However, until social and economic improvements are brought among the urban poor community, they cannot effectively improve their health standards.

Arising out of the study of health services as provided in one of the slums of Hyderabad, it is felt that the following steps should be taken to make it much more effective:

1. Effective programme should be taken up in the slums to improve the social and economic status.
2. More effective coordination is needed among the engineering section, community organisation staff, and the medical team members engaged in the Bapu Nagar slum to manage the welfare of the slum community.
3. Health sign boards should be displayed on a large scale in the slum area to convey messages to up-keep their health.
4. Illicit liquor shops in the slums are causing much damage to the dwellers' health, efforts should be made to remove them.
5. Promotion of health should also include promotion of sports and recreation facilities in the slum area.
6. Public health measures should be strengthened to prevent and check communicable diseases.
7. Strengthening the health centre should be done with more equipments and services. It should converge services of governmental, non-governmental agencies and render them to the poor slum dwellers.
8. The member of the health team should be given continuous orientation training to tackle the health problems of the poor urban community.
9. The health centre should be continued by the Municipal Corporation even after the HSIP Phase II programme is phased out. ☐

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